

**THE RAILWAY GAZETTE**

A Journal of Management, Engineering and Operation  
INCORPORATING

Railway Engineer • TRANSPORT • The Railway Petrol  
The Railway Times • Herapaths Railway Journal • RAILWAY RECORD.  
RAILWAYS • ESTABLISHED 1835 • RAILWAY GAZETTE

33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1.

Telephone: WHItell 9233 (12 lines) Telegrams: "Trazette Parl, London"  
BRANCH OFFICES

GLASGOW: 87, Union Street . . . . . Central 4646  
NEWCASTLE-ON-TYNE: 21, Mosley Street . . . . . Newcastle-on-Tyne 22239  
MANCHESTER: Century House, St. Peter's Square . . . . . Central 3101  
BIRMINGHAM: 90, Hagley Road, Edgbaston . . . . . Edgbaston 2466  
LEEDS: 70, Albion Street . . . . . Leeds 27174  
BRISTOL: 8, Upper Berkeley Place, Clifton . . . . . Bristol 21930

Annually £4 10s. by post.

Single copies, Two shillings.

Registered at the G.P.O. as a newspaper. Entered as second-class matter in U.S.A.

Editor: B. W. C. Cooke, Assoc. Inst. T.

Vol. 101] FRIDAY, NOVEMBER 5, 1954 [1 o. 19

## CONTENTS

	PAGE
Editorial Notes . . . . .	505
Reorganisation of the Railways . . . . .	507
Locomotives and Wagons for India . . . . .	507
Colonel Wilson's Annual Report . . . . .	508
Letters to the Editor . . . . .	512
The Scrap Heap . . . . .	513
Overseas Railway Affairs . . . . .	514
Postwar Speed Recovery in Great Britain . . . . .	515
Diesel-Electric Mobile Crane . . . . .	517
Oil-Burning Locomotives for Bolivia . . . . .	518
Grinding Train for Corrugated Rails . . . . .	520
Personal . . . . .	523
East African Railways District Officers' Conference . . . . .	525
European Timetable & Through Carriage Conference, 1954 . . . . .	526
Commons Debate on Railway Reorganisation Scheme . . . . .	527
Contracts and Tenders . . . . .	529

### Capital Investment in the Railways

THE announcement at the end of the debate in the House of Commons on Monday on the railways reorganisation scheme that the British Transport Commission hopes to present a plan for the re-equipment and modernisation of British Railways before the end of the year gives a time limit to the conjecture and discussion which have been rife in the last few months. Mr. John Boyd-Carpenter, Minister of Transport & Civil Aviation, said that the plan would be of a drastic and exhaustive nature, based on a re-assessment of the future rôle of the railways in this country. He pointed out that political recriminations on the question of the provision of capital for the railways were out of place, as it seemed to have been the policy of all Governments since the war to give priority in capital investment to fuel and power, leaving railways well down the queue. Mr. Boyd-Carpenter did not state the amount to be spent on capital development. A figure which recently was regarded as having some official authority as an amount which could usefully be invested was £500,000,000 over a period of 10 years. Earlier in the debate, Mr. Ernest Davies, for the Opposition, had stressed the need for railway modernisation, notably

in suburban electrification and the dieselisation of passenger services. Some of these points are likely to be covered in the scheme, but until then it is profitless to speculate on the emphasis which may be given to any particular form of traction. Knowledge that such a plan exists is likely to raise the morale of railwaymen who may have felt that their interests were being subordinated to those of workers in other nationalised industries. Those officers who have striven, often perhaps with inadequate facilities, to retain traffic for the railways will be encouraged in their efforts by the knowledge that rehabilitation is now only a matter of time, and that they should, in the fairly near future, be able to offer more attractive services as new equipment is introduced.

### New Zealand to Place Large Wagon Orders

SOME 2,950 new wagons are to be acquired by the New Zealand Railways in 1955-58. The Government has authorised expenditure of £3,675,000 for the purpose. About half will be built by the railways and the remainder imported. The Railways Department already is engaged on a wagon replacement scheme. New stock on order in April last totalled 1,820 wagons, and most will be in traffic by the end of 1955. Between then and March, 1958, however, many obsolete wagons will be withdrawn and the present programme both covers their replacement and caters for the continuing expansion of traffic. The orders will include 100 four-wheel cattle wagons; 50 bogie cattle wagons suitable for running in express goods trains; 700 12-ton covered wagons; 1,550 15-ton high-side open; 100 low-side open; 50 30-ton bogie high-side; 150 flat top; and 150 four-wheel and 100 bogie insulated wagons. The last-mentioned will be used mainly for meat and dairy produce traffic and will be all-steel.

### Possible Cut Forecast in S.A.R. Rates

IF the present buoyancy of South African Railways revenue persists it may eventually lead to a reduction of some rates. Mr. D. H. C. du Plessis, General Manager, South African Railways & Harbours, admitting this possibility in a recent address, said that if reductions were found practicable they would have to be on the basis of what was of benefit to the country in general rather than in favour of specific interests. Discussing criticism of the new tariff book he observed that from a tariff aspect the amendments could have been justified years ago; Mr. P. O. Sauer, the Minister of Transport, had announced as long ago as 1952 that the main recommendations of the Newton Commission were to be put into force. Organised industry and commerce were given ample opportunity to discuss the matter with the railway management and had agreed, with some reservations, on the broad principles of the commission's report. Mr. du Plessis said that in his view it was fortunate that the tariff changes were taking place during a period of great prosperity, as adjustments could be made more easily in such circumstances than during a recession.

### Financing Continental Rolling Stock Purchases

ONE of the resolutions taken at the recent two-day O.E.E.C. Conference in Paris of the Ministers of Transport of 15 European countries was to establish an international company to finance the purchase of rolling stock. The capital would be some Swiss fr.50,000,000 (£4,000,000) and the company would benefit from tax exemptions and other facilities in the participating countries. The intention is that at first the company, which would be owned mainly by Western European railway administrations, would exclusively finance purchases of standard wagons. Nine of the countries concerned—France, Germany, Italy, Spain, Belgium, the Netherlands, Luxembourg, Austria, and Switzerland—are forming a group to prepare for the creation of the company. The ministers also adopted resolutions in favour of standardising diesel engines and invited the members to hasten as much as possible their research work in this direction, and

of developing goods services in common. Mr. J. A. Boyd-Carpenter, Minister of Transport & Civil Aviation, was represented at the conference by Mr. Hugh Molson, Parliamentary Secretary to the Ministry of Transport.

### Road Haulage Sales and the Company Structure

A RECENT report that the British Transport Commission has formed a new company, to be known as N.M.U. (1954) Limited, in connection with the denationalisation and disposal of the road haulage assets of the Commission, marks the implementation of some provisions of the Transport Act, 1953, of which little has yet been heard. Perhaps the most interesting feature of the new company is that its objects are "to carry on the business of general contractors for transport by land, sea, and air of passengers, goods, etc." It may be that the Commission intends to offer the shares of the company for sale in the near future, but if this is not so, or the Commission should retain a controlling interest in the company, it would seem that the way is open for the Commission to engage, albeit indirectly, in forms of transport from which it was specifically excluded by the Transport Act, 1947, and which find no place in the general duties laid down in the Act of 1953. The way may thus lie open for an extent of transport co-ordination which seemed impossible to critics of the 1953 Act. Even the helicopter services of the next decade might conceivably be controlled by a company such as this, and the development is one of great possibilities.

### Indo-Pakistan Passenger Services

PASSENGER services between India and Western Pakistan were resumed last week after a lapse of seven years. During that period the timetables have shown no through services. The "Frontier Mail," which before Partition ran through between Bombay and Peshawar and was so named after the North West frontier of the Indian Empire, has been running only to and from Amritsar, a few miles beyond the new Indo-Pakistan frontier—and only a few miles short of Lahore. With Eastern Pakistan, through passenger services with India were resumed some time ago, but with long halts for formalities on both sides of the frontier. Partition certainly will prove to have occasioned major changes in passenger traffic flows, just as it has caused a re-orientation of goods traffic. There is the new Assam Link route to North Eastern India, avoiding Pakistan territory. Much through passenger traffic now goes by air. The resumption of through railway traffic nevertheless augurs as well for the railways as it does for the political relationship of the two countries.

### Asian Railway Research Pool Proposed

THE creation of an Asian Railway Research Pool in which Indian, Japanese, and other Asian railways would open their facilities to smaller railways of the region was suggested by Pakistan at the Third Session of the Railway Sub-Committee of the United Nations Economic Commission for Asia & the Far East held last month in Tokyo. Offers of practical co-operation with the railway administrations of the countries concerned were made by the representatives of the United Kingdom, the U.S.A., the U.S.S.R., France, India, and Japan. As mentioned in the account given in our October 22 issue, two delegates represented Britain; Mr. S. Potter who attended as technical adviser to Mr. R. T. D. Ledwood of the British Embassy, Tokyo, was nominated by the Locomotive Manufacturers Association. It was recommended that the countries concerned should make full use of the training facilities of the training centre at Lahore, to which several Governments and some British firms had presented demonstration equipment. The question of types of sleepers was given much attention at the conference, which had before it a special E.C.A.F.E. study describing concrete sleepers and long welded rails. It was suggested that E.C.A.F.E. secretariat should compile a report embodying the latest available information on diesel traction.

### European Summer Services, 1955

THE decisions of the European Timetable & Through Carriage Conference held in Budapest on October 6-16 include not only accelerations next summer of important international trains, notably the "Rome Express" and the "Sud Express," but also the extension of the duration of the 1955-56 winter passenger services to June 2, 1956—exceptionally late for Continental summer services to begin—and the inclusion of ordinary third class accommodation in the "Simplon-Orient Express" on its through journey from Paris to Istanbul—a sign of the times; for only a few years ago this famous train was composed exclusively of sleeping, restaurant, baggage—and shower bath cars—of the Wagon-Lits Company. A brief account of the main decisions, as they affect services to and from this country, is given on another page. As in previous years, the British delegation played an important part in bringing about improvements. It is noteworthy that an important innovation in international traffic, the reclining chair car, is made in the Calais-Rome through service specially designed for traffic to and from Britain. An indication of holiday traffic trends is the increase in through services between this country and Yugoslavia.

### British Productivity Council

THE British Productivity Council, formed in November, 1952, is now almost two years old. In a progress report issued recently, some account of the activities of the council since its campaign was launched at a meeting in London in March, 1953, is given. The programme of the council is based on two lessons from the experience of its predecessor, the United Kingdom Section of the Anglo-American Council on Productivity: the benefits of joint consultation between employers and trade union leaders on increasing productivity and efficiency in industry, and the value of exchanges of information and experience between firms. The principal rôle of the council is now to form and assist Local Productivity Committees. These committees, which now number 94, contain members from both sides of industry. Their object is to increase local interest in productivity. One method employed is to arrange for teams from firms to visit other firms in their area, under a circuit scheme, to study working methods. Among members of the Council who have special interest in transport is Sir John Benstead, Deputy Chairman, British Transport Commission.

### Research in Mechanical Engineering

IN his recent presidential address to the Institution of Mechanical Engineers on research in mechanical engineering, Dr. R. W. Bailey discussed the respective merits of individual effort by firms, and co-operative effort in research associations, the use made of results, and the part played by the Institution. Buildings and equipment are secondary, provided they can serve essential needs, and one of these is that they should not only be adequate, but be situated to ensure full effectiveness. Much economy in cost, and of the increased fruitfulness of the work undertaken, he points out, results from purposeful thinking beforehand, to perceive and grasp essentials, so that the risk of misdirected or wasteful effort is reduced to a minimum. Whether the staff is large or small in numbers, Dr. Bailey considers, should be inspired by the principle that its purpose is to contribute to engineering progress, not merely to find solutions to isolated problems put to it, but to take a much wider interest, and to see a problem, or a number of problems in their engineering setting.

### Heavy Steam Locomotives for Bolivia

FEW railways in the world have had a more remarkable succession of narrow-gauge steam locomotives over half-a-century than the Antofagasta (Chili) & Bolivia Railway, the latest stage in whose non-articulated locomotives, the Vulcan 4-8-2s, is described in an article elsewhere in this issue. The Chilean section of the line was originally

of 2-ft. 6-in. gauge, and had British, American, and German built 2-8-0s and 2-8-2s. Later this section was converted to the metre gauge of the Bolivian section, but at no time has there been a tender engine with fewer than eight coupled wheels, despite curves of 230-250 ft. radius. The Chilean section has most of the 1 in 33 grades, but the Bolivian section never descends below an altitude of 8,000-10,000 ft., though the Chilean section has the highest summit, on the Collahuasi branch. After the gauge conversion there were some notable 2-8-4T and 4-8-2T engines from various British builders, besides 2-8-2 tender engines; and also a series of 4-8-2 + 2-8-4 Beyer-Garratts, which operate on the main line and on the Rio Mulato-Potosi, Cochabamba, and other branches, and at one time were supplemented by similar engines hired from the Buenos Ayres Midland and Argentine State Railways.

### Reorganisation of the Railways

THE debate in the House of Commons on Monday, of which a brief account appears elsewhere in this issue, has done little to amplify the proposals of the White Paper on the Railway Reorganisation Scheme issued last July. The motion before the House was that it should "take note" of the White Paper, and, although this was agreed to, it was made plain that the Opposition reserved the right to vote against the scheme when it again came before the House. In introducing the motion, Mr. Hugh Molson, Parliamentary Secretary, Ministry of Transport & Civil Aviation, repeated the assertion that the scheme was the logical and natural development of the interim scheme which had operated since October, 1953. Six boards are to be responsible for the six Regions, which are to be re-named areas. This change of title seems pointless. It means another round of changing signs and all the other items of railway equipment which now bear the word "region"; it does not foster *esprit de corps* as the re-introduction of the word "railway" might have done.

Some light has been thrown on the composition of the boards, which are to have as members men in contact with commerce, industry, and labour, and representatives of the travelling public. They are, Mr. Molson says, to be "wise men of light and leading" who will be able to give useful guidance in the administration of the areas. They are not to be representatives of trade or other sectional interests. The Government thinks it unwise to have in charge of the railways an executive exercising functional control and consisting largely of technical experts. The determination of general policy is to remain in the hands of the Commission, and the boards are charged with the application of that policy to the needs of their areas.

Each board, it is now stated, will be responsible for producing an annual budget of revenue and capital expenditure which will be modified as necessary by the Commission. The boards will then be responsible for carrying out the works. The area budgets are estimated at some £50,000,000 a year, with rather more in some areas. Of a total annual expenditure of some £446,000,000 it is proposed that £445,000,000 should be spent by the boards. The difficulty of finding men with the right qualifications, able and willing to undertake such responsibilities on a part-time basis, is evident. Much will depend on the frequency of board meetings and the interpretation of the functions of the Chief Regional Managers. The chain of command, which will run from the Commission to the boards and thence to the Chief Regional Managers, seems likely to be by-passed in many cases by the "ordinary staff consultations" between the Commission and the areas, which were envisaged by Mr. John Boyd-Carpenter, Minister of Transport & Civil Aviation, in his closing speech during the debate. Appointments to the boards will be in the hands of the Commission, which may mean that boards will be reluctant to dispute any ruling from the centre. One member of each board, not necessarily the chairman, will be a member of the Commission, and it was made clear by the Minister that, although the appointments to the boards are not to be representative of sectional interests, experi-

enced trades unionists are likely to be among the members of the boards to be chosen for their personal qualities.

The one duty of the boards made clear during the debate is the authorisation of expenditure of the funds allocated to the areas. This raises a fundamental problem. Either the areas are to compete with each other in the open market for goods and services or they must collate their requirements by inter-area meetings and issue joint tenders. If the first policy is adopted it is likely to lose many of the savings claimed for centralisation, and if the second course is followed it amounts to a continuation of the present policy in a rather more complicated manner, with the final decisions taken out of the hands of the individual boards.

The more that is revealed of the functions of the area boards the more we must return to the comment in our July 16 issue, quoted in the debate by Mr. David Jones, the Member for the Hartlepoons, that their creation seems neither necessary nor desirable. Apart from the suggestion by the Minister that the boards might be concerned with local applications of the new charges scheme, little has been said to indicate that they will exercise any function not being performed by existing machinery. Mr. Boyd-Carpenter suggested that it would be of great value to the Chief Regional Managers to work in close contact with boards having a wide general experience and understanding of the needs and feelings of the people in the area. This may well be, but, quite apart from existing commercial contacts at all levels, the Transport Consultative Committees already provide such a relationship. The boards seem to be poised uncertainly in the railway structure and it will require much tact by their members if they are to command that confidence from the staff and the public which the Government so plainly desires.

The debate on the whole was unproductive. Apart from the main question of railway organisation, Mr. Callaghan made some pungent remarks on what he said was the unfortunate policy of the Commission, of reducing railway hotel facilities—which again raises the question whether railway hotels should be returned to railway management.

### Locomotives and Wagons for India

THE negotiations for the locomotives and wagons which India is to receive through the Foreign Operations Administration in Washington have taken a new turn with the reported order by Mr. H. Stassen, Director of the Administration, referred to in our last week's issue, that countries tendering shall take a percentage of the United States coal surplus in part payment. In deference to the American locomotive and rolling stock industry Mr. Stassen has already decided to divide the orders for 100 "WG" locomotives equally between United States and overseas builders and to place orders for 2,000 of the 5,000 wagons in the U.S.A. In our September 10 issue we forecast that a Japanese group might build 50 locomotives at a price of \$81,470 apiece, but it seems likely now that the order will be for only 25; the order for the remaining 25 to be supplied from overseas might go to the North British Locomotive Co. Ltd., or to Fried Krupp A.G., which firms are reported to have quoted prices of \$88,800 and \$87,140, respectively. The Baldwin-Lima-Hamilton Locomotive Works is expected to receive the United States share of the locomotive contract, although its price was \$178,200 per locomotive.

F.A.O. has said that the amount of coal which it will try to sell will depend on import requirements of each country, but it is expected that Japan, whose share in the contract is large, will be urged to buy in America much of the coking coal it needs. The proviso would appear to rule out tenders from countries such as Belgium, which do not want to import coal. It is understood that, besides these contracts, the F.O.A. will buy 3,800 more wagons for India, in the proportion of one to three to be built in the U.S.A. The wheels and axles for both broad- and metre-gauge wagons in the original order are expected to be supplied by a Japanese firm, after further price negotiations. Orders for wagon bodies on the other hand, are expected to be divided between a number of overseas suppliers.



### Colonel Wilson's Annual Report

THE tragic consequences of the exceptional double collision at Harrow & Wealdstone on October 8, 1952, made that year, which otherwise would have been a remarkably good one, unusually bad from the point of view of train accident casualties, and it was to be hoped that 1953 might bring a welcome improvement in this respect. While the number of casualties did fall considerably, nevertheless 22 fatalities are announced by Lt.-Colonel G. R. S. Wilson, Chief Inspecting Officer of Railways, Ministry of Transport & Civil Aviation, in his annual report.

There were 1,123 train accidents, properly so called, compared with 1,243 in 1952, the great majority of them, however, being as usual minor cases. Modified methods of reporting in the war years make certain comparisons difficult. All passenger train collisions and derailments always have been reported, and of these there were 128 in 1953, two more than in 1952, and 146 in 1951. The averages for the periods 1946-50 and 1935-39 were 144 and 140. The total of train accident casualties in 1953 came to 656 (48 killed, 608 injured) compared with 1,435 (133 and 1,302) in 1952.

railway staff was responsible for loads being safe to travel. One of these afforded a sharp reminder of the vital importance of that being invariably faithfully carried out. Train crews were answerable for 191 train accidents, compared with 188 in 1952, the higher number as against those due to signalmen's errors "reflecting the entirely different character of the work" but not suggesting, Colonel Wilson emphasises "that enginemen and guards are less conscientious than signalmen in the performance of their duties." Fifty-nine cases were due to signals not being obeyed, a figure which has been fairly level since the improvement to 63 in 1949 from the average of 89 for the previous three years. Of the 398 train accidents reported under other causes, 35.4 per cent of the total, misconduct of the public accounted for 184, or 16.4 per cent, including 63 collisions with road vehicles at crossings. The remainder of 214 included fires in trains and accidents caused by doors being opened and fouling other vehicles or structures. Route mileage open was reduced by 54 to 19,445 mainly by branch line closures, and electrified mileage remained virtually unchanged at 2,936. Total staff employed at the end of the year was 616,509 compared with 624,510 for 1952, a decrease due partly to more economical use of man power but "the slight

TRAIN ACCIDENTS: PRIMARY CAUSES

	Collisions	Deraillments	Running into obstructions	Fires in train	Miscellaneous	Total
1. Failure of train crews (including guards):—						
(a) Passing signals at danger ... ..	23	9	25	—	2	59
(b) Other irregularities or want of care ... ..	123	36	34	—	4	197
2. Failure of signalmen:—						
(a) Irregular block working ... ..	9	1	2	—	—	12
(b) Other irregularities or want of care ... ..	19	18	9	—	—	46
3. Failure of other operating staff ... ..	58	6	90	1	2	157
4. Failure of train crews and/or signalmen and/or other staff	39	19	19	—	—	77
5. Faulty loading ... ..	3	14	1	—	1	19
6. Technical defects:—						
(a) Engines ... ..	3	15	—	7	2	27
(b) Vehicles:—						
i. Drawgear ... ..	6	8	1	—	—	15
ii. Other ... ..	9	35	1	12	2	59
(c) Track or signalling apparatus ... ..	4	42	6	—	—	52
(d) Defective structures (other) ... ..	—	—	5	—	—	5
7. Other causes:—						
(a) Snow, landslides, floods ... ..	—	2	5	—	—	7
(b) Animals on the line ... ..	—	—	72	—	—	72
(c) Misconduct of the public ... ..	68	1	82	23	10	184
(d) Miscellaneous ... ..	15	18	19	75	8	135
Total ... ..	379	224	371	118	31	1,123

The fatalities arose from 19 accidents and comprised 22 passengers, seven railway servants and 19 other persons, occupants of road vehicles at crossings. The 22 passenger fatalities occurred in three collisions, namely 12 at Stratford—the first case of one on a tube section of line since the opening of the City & South London Railway in 1890—nine at Irk Valley Junction and one at Forster Square Station, Bradford. It is seen that 50.5 per cent, or 576 of the 1,123 train accidents, were attributable to irregularities or want of care on the part of operating staff. Of the 47 collisions and derailments for which signalmen were primarily responsible 10 were cases of irregular block working, compared with 13 out of 41 in 1952.

"Many of these errors," says the report, "would have been prevented by modern block controls and/or track circuiting, but it must be recognised that elaborate signalling equipment can only be justified on the more important lines. Even where it is installed mistakes on the part of signalmen can still lead to accidents, especially when traffic is not running smoothly, and it is to be regretted that there was also a case during the year where safety controls were deliberately put out of action." Colonel Wilson goes on to remark that "no practicable form of equipment would have prevented the serious breach of the block regulations which contributed to the collision at Irk Valley Junction."

Failures on the part of operating staff, other than signalmen or train crews, resulted in 64 collisions and derailments compared with 69 in 1952, excluding 19 cases due to faulty loading in railway yards or private sidings where

improvement in the recruitment of men for the operating, locomotive running and track and signalling maintenance staff was not maintained. . . . Wastage is still a source of anxiety. There was a slight decline in passenger journeys but freight traffic tonnage increased by 1.4 per cent and main line train mileage rose from 376,000,000 to 379,000,000, with 34,000,000 for London Transport lines.

#### SIXTEEN FORMAL INQUIRIES

Formal inquiries were held into 16 train accidents. At Plessey Road public crossing on April 4 a train broke through the gates, injuring pedestrians. Normally across the road the gates were worked under release from the signal box  $\frac{1}{4}$  mile away with telephone communication. The train had been checked at a signal 190 yd. from the crossing, which was later replaced, the signalman thinking the train must have passed the crossing. He then released the gates. He had forgotten to inform the gatekeeper of this train but had mentioned one in the other direction. It was recommended to mark important distances on signal box diagrams and that signalmen should acquire a knowledge of gate boxes, ground frames, etc., under their control.

At Stratford, on April 8, a train collided in a tube tunnel with the preceding one with 12 fatalities and many serious injuries. The station is on the surface and after it the line dips at 1 in 30 and then curves at 20 ch. The starting signal was held at danger by the breakage of a train stop ahead and the driver failed to exercise sufficient caution, allowing the train to attain too high a speed. He and two others had isolated their trip cocks irregu-



larly on instructions from British Railways staff, not familiar with London Transport rules. Several staff were implicated and action was taken to clarify the rules and ensure British Railways staff being acquainted with them wherever necessary. It has been arranged to install additional stop signals and to consider doing so at other places where signals and tail lamps can be obscured by curvature. Early extension of direct communication between drivers and Control, already installed experimentally, to the whole tube system was recommended.

At Ardrossan, on April 26, passage of an exceptionally heavy load caused collapse of a bridge, fortunately without injuries. Its height necessitated its taking a route including six weak railway overbridges, of which this one was particularly so. Hauliers, although warned, on this and many occasions, ignored all warnings, and also had moved this load without giving the notice required by a General Order of 1952. It was recommended to examine the question of moving heavy loads to obtain more effective control and make better use of other means of transport, so ensuring maximum freedom with minimum risk to public safety.

An unusual accident occurred on April 28 when part of the Clifton Hall tunnel at Swinton collapsed, where an old unknown construction shaft had been filled in, leading to houses collapsing with five fatalities. Following a defect noticed a fortnight before steps were being taken to strengthen the roof. There was some delay, and destruction of records in a fire had led to ignorance of the shaft's existence or probably more energetic steps would have been taken. A recommendation was accepted that all tunnel records be reviewed and any special features brought to the notice of staffs, positions of disused shafts to be permanently marked. At Ystrad Caron on May 5 a special train ran down a motor van, killing the six occupants. Evidence was conflicting, but probably the van passed straight on to the line, the view of which is good. Only ordinary care by road drivers is necessary for safety. The crossing being much used by schoolchildren, it was recommended to erect whistle boards and provide wickets. At Bradford Forster Square, on May 20 a driver, who had allowed his mind to wander, moved against a starting signal at danger foul of an incoming train and a collision resulted, with one fatality. A case of overrunning a colour-light signal took place on May 24 at Forest Gate Junction, shortly after dawn. The driver of an electric train had seen the previous signal change to yellow, under approach control, but did not reduce speed and, apparently becoming momentarily drowsy, failed to see the one protecting a crossover movement with which he collided. It was decided to shorten approach controls of this kind and keep signals at red until a train was considerably closer than the 225 yd. involving in this instance.

On June 9, at Gollanfield Junction, the driver of an unfitted freight train ran through the station at speed and met an oncoming passenger train on the single line, with three fatalities. He had failed to observe the distant signal and travelling at about 55 m.p.h. evidently was expecting to run through, as he placed the tablet in the catcher, but reduced speed somewhat when his fireman told him that the distant was passed at caution. Although required to stop the train at it the signalman pulled off the home signal prematurely. This probably misled the driver, who released the brakes. The signal was later thrown on again.

The British Transport Commission felt unable to accept a recommendation limiting unfitted trains to 45 m.p.h., as it would interfere with freight working in many areas and drivers always were under strict obligation to keep trains under proper control. The accident brought to light some discrepancy between the single line regulations of the former companies and standardisation was recommended. A serious derailment took place, although fortunately without grave results to passengers, at Abington on August 8, a fairly hot day, due to distortion of the track under an express travelling at 60 m.p.h. This was on a section of bull-head track, following one of 113 lb. flat bottom, fastened with elastic spikes. Insufficient attention had been paid to three fundamental points in all

instructions for prevention of heat distortion, freedom of rails to move in the fishplates, timely adjustment of creep and plenty of well consolidated ballast, which was inexcusable, as previous experience in the Region had shown bull-head track, at its junction with heavy rigid flat-bottom, to be particularly liable to distortion if maintenance was not good. Appropriate action was taken to bring this home to those concerned and ballast was specially strengthened at like places.

On August 15 in clear daylight an electric train overran the home signal at Irk Valley junction and collided nearly head on at 35 m.p.h. with a steam train, allowed to cross its path irregularly. Its leading coach was precipitated off the viaduct and the motorman and nine passengers killed. There was coincidence of two failures of the human element. The signalman had committed this irregularity before and the men in neighbouring boxes had been breaking the rules. This drew attention to the need of better supervision and more regular scrutiny of train registers.

A derailment on August 16 between Wilnecote and Kingsbury was not easy to explain, but it was concluded that track distortion had been caused by the lateral oscillation of the engine, built up by alternations in cross level corresponding with its natural period at a critical speed, while uneven wheel loading and side play also contributed to oscillation of the tender until a wheel rode over the rail. The faults in engine and track were not dangerous in themselves but came in exceptional combination. The Regional officers disagreed with these conclusions and thought the trailing bogie of the leading coach first became derailed. Power points moved irregularly at Bethnal Green on September 4, derailling an express, fortunately travelling at only 20 m.p.h. There were no serious casualties. Integrity of the signalling circuits was established and it was proved that no traction leakage could have affected the point motor. It was concluded that its operation was due to a false feed cross connection, no doubt caused by a lineman inadvertently making such while testing in the relay room. Design of the terminal links has been altered to minimise risk of this and metal guards to test lamps abolished. A tractor and trailer were wrecked and the occupants killed by a train at Moulineux level crossing on September 8. The gatekeeper opened the gates without permission. The crossing, little used, is kept locked to the road. Opening it irregularly for a motor car he was closing the far gate when he saw the tractor coming on the line and the train. Instructions were adequate and there was no excuse for him.

A fatal buffer stop collision occurred at Guildford on September 18. An experienced motorman approached too fast and braked too late. He tried to reverse but actually applied full power. He appeared not conversant with the combined electro-pneumatic and Westinghouse brake and when emergency arose lost his head. His training should have been adequate, but it was felt that closer questioning by the inspector would have been desirable and that special attention should be paid to ensuring motormen being able to handle the equipment rightly, ordinarily and in emergency.

A loose eccentric rod and strap on an express travelling at 55 m.p.h. at Goswick on October 28 caught in a stretcher bar and pulled open facing points, derailling the train, but without serious consequences. Probably the displacement had occurred because a locknut, which should have been held a split pin, became unscrewed. Attention was again drawn to the importance of correct fitting of split pins and of seeing all is right with them during routine engine examinations. At Longniddry on December 17 a parcels train ran at about 60 m.p.h. into a decauville type turnout, fallen from a freight train, with serious consequences. With others it formed an overhanging load, which had not been correctly roped, leaving them free to move when a single rope, fraying in contact with them, broke. The principle has been accepted that overhanging parts of loads shall be so roped as to remain firm, even if that part of the

rope fails. Instructions on protection against fraying are to be issued.

Although no passenger line was involved and the accident is classed as a "movement" and not a "train" accident, the report mentions the case at Granton Harbour on April 24 when a light engine collided at 40 m.p.h. with another and some vans, with fatal results. The line was treated as a yard reception line and subject to a 15 m.p.h. restriction, well known to the driver, to whose grave negligence the accident was solely due.

A number of other accidents were dealt with by correspondence or discussion with the Regional Officers and the report gives particulars of some 30 cases. They cover a variety of circumstances, including a false assumption of track circuit failure and irregular authorisation of passing a signal at danger, followed by a collision; a block working error and, what is much more serious, a case of tampering with apparatus, certain mistaken actions on the part of signalmen and misunderstandings between them and trainmen and ground staff, with some failures to carry out Rule 55. There were also some cases of passing signals at danger, including drivers moving against starting signals on receiving the right-away from the guard, while proceeding against a subsidiary signal at danger figures in another.

Other cases include one of two trains coming into contact on an 8-ch. curve where it had not been appre-

ciated that the 6-ft. clearance had been reduced in the course of maintenance.

#### CRANK AXLE FAILURE

A notable case of crank axle failure at high speed occurred at Crewkerne but derailment was confined to the left-hand wheel of this axle and the train was stopped safely. There was a creeping flaw under the chain sprocket of the valve gear, not unclamped from the axle since the engine was built in 1945. All 30 engines of the class were at once withdrawn from service and their crank axles examined thoroughly, with magnetic tests and wheels pressed off. The majority were found to be flawed and the engines were kept out of service until new had been substituted. Like precautions were taken with a larger class of similar but lighter design in which the crank axles were less heavily stressed. The flaws had remained undetected because it had not been felt necessary until recently to remove chain sprockets during workshop examinations, but very thorough tests are now being made regularly with them removed and the design of replacement axles is being strengthened and modified.

#### BROKEN RAILS AND OTHER FAILURES

Broken rails again were fewer, 352 against 371 in 1952, and one caused derailment of a passenger train at slow speed. The rise of 26 in other failures of track and struc-

#### CASUALTIES IN TRAIN AND MOVEMENT ACCIDENTS

	Total	Killed				Injured				All casualties per million train miles	
		Total	Passengers	Railway servants	Other persons	Total	Passengers	Railway servants	Other persons	Killed	Injured
1915-1919 ..	6,122	616	174	341	101	5,506	1,731	3,600	175	1.8	16.5
1920-1924 ..	6,638	407	92	248	67	6,231	2,577	3,518	136	1.1	17.0
1925-1929 ..	7,526	368	91	210	67	7,158	3,733	3,267	158	0.9	18.0
1930-1934 ..	7,440	308	74	183	51	7,132	4,394	2,592	146	0.7	17.0
1935-1939 ..	8,376	338	86	198	54	8,038	5,342	2,576	120	0.8	18.0
1940-1945 ...	1,222 (1)	477	141	254	82	745 (1)	256 (1)	455 (1)	34 (1)	1.2	1.9 (1)
1946-1950 ...	8,878	347	91	204	52	8,531	5,647	2,763	121	0.9	21.2
1946 ...	9,529	413	120	236	57	9,116	5,691	3,281	144	1.0	22.6
1947 ...	9,203	409	148	218	43	8,794	5,871	2,785	138	1.1	22.9
1948 ...	8,683	340	87	191	62	8,343	5,554	2,678	111	0.9	20.9
1949 ...	8,651	285	44	188	53	8,366	5,640	2,625	101	0.7	20.2
1950 ...	8,329	290	60	187	43	8,039	5,483	2,446	110	0.7	19.5
1951 ...	8,176	283	97	158	28	7,893	5,328	2,482	83	0.7	19.2
1952 ...	8,470	386	160	180	46	8,084	5,505	2,472	107	0.9	19.7
1953 ...	7,771	306	66	185	55	7,465	5,051	2,304	110	0.7	18.0

(1) Serious injuries only

#### ACCIDENTS, EMPLOYMENT, AND OPERATING STATISTICS

—	Class I		Railway servants (March)	Passenger journeys originating (incl. season tickets)			Freight-tonnage originating (excl. free hauled)	Ton-miles (incl. free hauled)	Miles operated			Passenger-miles (estimated)		
	Train accidents	Failures of rolling stock or permanent way		Total	Main line railways	London Transport			Main line railways			London Transport: Train	Main-line railways	London Transport
									Train	Shunting	Other			
	Number		Thousands	Millions										
1920-1924 ...	1,009	11,153	699 (2)	1,848	—	—	303	17,457	369	121	28	—	—	—
1925-1929 ...	941	9,141	679	1,661	—	—	298	17,562	401	123	29	—	—	—
1930-1934 ...	796	5,772	602	1,612	—	—	270	16,060	416	113	27	—	—	—
1935-1939 (1) ...	745	4,149	592	1,733(3)	1,255(3)	478(3)	281	17,230(3)	412	115	29	32	18,993(4)	2,297(4)
1940-1945 (1) ...	387	160	604	1,661	1,210	451	288	23,844(5)	356	124	37	26 (6)	33,191(7)	2,608(7)
1946 ...	1,237	5,162	652	1,855	1,266	589	262	20,639	373	116	36	30	29,231	3,029
1947 ...	1,388	4,679	660	1,714	1,140	574	257	20,190	355	113	35	31	23,015	3,095
1948 ...	1,293	4,398	703	1,646	996	650	276	21,502	366	112	41	34	25,093	
1949 ...	1,176	4,062	648 (8)	1,634	993	641	280	22,010	381	109	41	34	24,958	
1950 ...	1,156	3,609	628	1,613	982	631	281	22,135	384	105	40	34	23,898	
1951 ...	1,280	3,436	622	1,624	1,001	623	285	22,902	376	104	40	35	24,302	
1952 ...	1,243	3,022	625	1,574	989	585	285	22,391	376	101	40	35	24,048	
1953 ...	1,123	2,675	616	1,565	985	580	289	22,766	379	100	40	34	24,143	

(1) Having regard to the altered basis under the Modification Order, fewer accident were reportable and only serious damage is included as from September 1, 1939, to December 31, 1945. The comparison is unchanged as regards traffic, movement and staff employed

(2) Four years, 1921-1924  
(3) Four years, 1935-1938

(4) For year ended August, 1939, only  
(5) Estimate for main lines—1942-1945

(6) Loaded only

(7) Three years, 1943-1945

(8) Railways and London Transport Executive's Staff only

tures to 102 was mainly accounted for by floods in the Scottish Region. There was also a failure of an old plate girder bridge without involving any train. All similar bridges have been specially examined and repairs and minor alterations to facilitate inspection effected where necessary. There were 2,100 failures of coupling apparatus against 2,460 in 1952, with proportion of goods to passenger trains of about 8 to 1, the chief liability to weakness being still in drawgear. Failures in goods trains, however, continued to diminish as older wagons became replaced. There were 25 accidents against 29 in 1952—collisions, derailments and/or cases of personal injury—from failures of coupling apparatus. Liability to accident as the result of the division of goods trains was 1.3 per cent. Again no collision or derailment resulted from division of a passenger train, illustrating the security afforded by the continuous brake. The proportion of fitted freight stock rose slightly from 14.2 to 15 per cent. The question of continuous brakes for freight trains generally is under consideration as a long term measure.

#### LEVEL CROSSINGS

There are 4,505 public crossings, of which 249 are without gates, and 21,311 of occupation type. The number of footpath crossings is not recorded. The report gives tables showing the accidents and casualties at them, with incidence of casualty. There were 256 accidents against 241 in 1952, 208 in 1951, and an average of 233 for 1946-50. Of these 218 were "train" accidents, 14 of them fatal, involving collision with gates or vehicles, compared with 198 in 1952. Formal inquiries were held into two cases at public gated crossings.

There were some cases of vehicles running into gates. In one at night a private car smashed them and was struck by a freight train. They had been run into several times, by day and night, in the past few years. Approach view was not good and steps are being taken to improve it. At Beccles a lorry collided with the gate post, damaged the gates and stopped foul of the line. The gatekeeper, despite disablement to his leg, ran 500 yd. in an unsuccessful attempt to stop a train.

In the occupation crossing accidents, of which eight were fatal, carelessness of users was as a rule responsible.

Total crossing casualties came to 45 killed and 50 injured compared with 39 and 55 in 1953. Of the fatalities 25 were pedestrians and 19 occupants of road vehicles. Division of fatalities was 12 at gated public crossings and one at ungated, 25 at occupation or accommodation crossings and seven at those of footpath type. "With more and more motor vehicles coming on to the roads every year," says Colonel Wilson, "and the ever increasing use of mechanical vehicles and implements by the farming community, a further rise in the number of these accidents can be expected, unless there is a notable improvement in the care taken by road users of all classes at unattended crossings; . . . advice on this matter has been included in the revised Highway Code. About 750 of these crossings, however, have acquired a heavy semi-public or industrial user in recent years . . . but are still equipped only with unattended field type gates." A comprehensive memorandum was submitted to the British Transport Commission in 1950, including recommendations for legislation to deal with the cost question, and other authorities have been consulted, but "there appears to be little prospect that legislation on these lines will be introduced, at any rate in the near future."

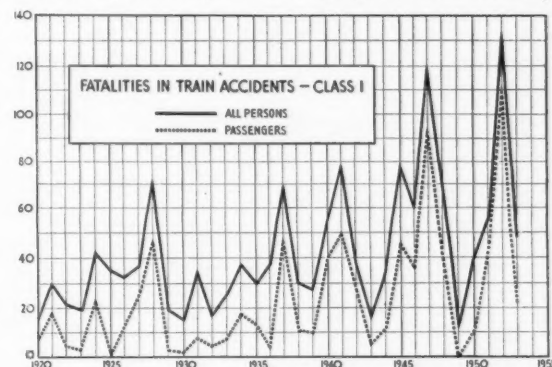
#### MOVEMENT ACCIDENTS

As far as the passenger is concerned "movement" accidents are almost always the result of want of care on his part. The matter is less simple when it comes to accidents to railwaymen, although there again regrettably too many are attributable to failure to act correctly. In 1953 178 were killed and 2,213 injured, 68 and 34 respectively, through being struck while working on the lines. Exactly half of these latter fatalities occurred where men were aware of a train but acted incorrectly, while 17 were caused by being unaware through want of vigilance.

Twelve were due to inadequate protection. Only four were attributable to the lookout man's fault; in some cases he failed to keep alert, "inexcusable when a man has no other duty to perform and should be giving his undivided attention to his responsible task."

There was a serious treble fatality at Uxbridge where a mechanical tamping machine was at work, and the gang near it was without protection and with only 200 yd. view of a train on the opposite track. The ganger, short handed, rather than upset the programme of a costly machine, decided to dispense with protection, but gave each man detailed safety instructions. Main responsibility was considered to rest, however, on the permanent way inspector, who should have made sure sufficient qualified lookout men were available, for Rule 234 (f) required more than one in the conditions obtaining. An important recommendation was accepted that rules be strengthened to provide that at least one lookout must be appointed on all occasions when machines of this kind are at work. The lookouts have also been equipped with electric sirens to supplement the ordinary horn.

There were other cases of errors of judgment on the need for protection, and two gangers lost their lives.



Comparison of train accident fatalities, 1920-53

Sometimes there was failure to hear the warning, for which a lookout always should be prepared, for it may be necessary to call men to safety while the noise continues. In one case he did not satisfy himself that his warning had been heard before turning his attention elsewhere. The simple advice given by Rule 234 (a) continues to be disregarded and Colonel Wilson observes that "it is still more regrettable that no less than two inspectors and 13 others in responsible positions were victims of their own want of care in this way." Thoughtlessness led to several casualties. As regards men hurt walking or standing on the line "much could be done by example and precept, but again supervisors appear to fail, as the fatalities in 1953 included two stationmasters, five gangers and sub-gangers, and a goods shed foreman."

#### CONCLUSION

Reviewing the year, Colonel Wilson concludes by observing that "with one passenger fatality in 71 million passenger journeys and one serious casualty in 27 million there was nothing that was discouraging in the record of safety on the railways in 1953, though it fell short of the highest standards of previous years. . . ." The renewal programme was more than sufficient to keep pace with wear and tear and better average condition of track, rolling stock, etc., was reflected in the totals of train accidents and failures. "All, however, will recognise that there is still a need for improvement in this direction and it is to be hoped that difficulties in recruiting and retaining good men for the operating and maintenance staff will soon be overcome. There is no longer any serious shortage of the materials and plant which are required to keep the equipment of the railways in sound condition, and safety should also benefit in the future from the major modernisation schemes to which much thought is being given. . . ."



## LETTERS TO THE EDITOR

(The Editor is not responsible for opinions of correspondents)

### Isle of Wight Railways

October 18

SIR,—While I sympathise with the inconvenience caused to hoteliers and residents in West Wight by the removal of their rail facilities, I do feel that the islanders themselves are largely to blame. From observation of Newport-Cowes trains, I should estimate the average winter passenger complement at half-a-dozen. The usual explanations do not apply here. Bus and rail return fares are equal. Newport Station is only 2 min. from the town centre, and Cowes Station is more conveniently situated for the High Street and pier than the bus terminus. The trains do not equal the 10-15 min. frequency of the buses, but they are regular, punctual, and clean. Virtually the only passenger traffic on this section during the winter comes from school-children and workmen, who doubtless enjoy sub-standard fares.

While the islanders regard their trains merely as a means of transporting summer visitors, the disappearance of railways from the Isle of Wight is not likely to be averted.

Yours faithfully,

J. N. FAULKNER

53, Westfield Road, Surbiton

### Communication Between Driver and Guard

October 10

SIR,—I refer to the letter from Mr. W. B. Shires in your issue of October 8. Both the type of wireless set and method of employment to which he refers are in use in the U.S.A. Other advantages are that the contact can be made with other trains in the neighbourhood, also with the nearest signalboxes and stations. This enables reports to be made before the train itself arrives. Patrolling lengthmen and permanent way gangs are also in touch with traffic control offices, should contact become necessary.

Freight vehicles could be fitted with continuous brakes in the course of time, the cost being spread over some years. This would probably pay for itself quickly through quicker handling, higher speeds, and greater efficiency achieved. As Mr. Shires says, the problem of finance may be difficult, but the project can be taken in stages. Continuous brakes in passenger trains only became obligatory in this country after an accident causing 80 deaths [Armagh, 1889]. Inefficient brakes are now illegal everywhere in this country except on freight trains.

Passenger trains are already fitted with axle-driven generators and batteries for lighting. Such equipment should supply enough power for wireless sets.

Yours faithfully,

COURTENAY BARRY

The Old Manor, Salisbury

### Occupational Crossings

October 18

SIR,—Yet another accident has occurred at an occupational crossing. A few days ago a resident of Formby was killed when an electric train crashed into his car. The track there is dead straight, but it was dusk and there was a slight mist. Between Freshfield and Formby the trains travel fast and it is difficult to spot them because their small white headlights mix with other lights in the vicinity.

A great number of this type of accident could be avoided if the railways would take the trouble to provide certain safeguards. I suggest two: (a) that the gates be interlocked with the signals so that the crossing could not be used when a train was in the section; and (b) that the

crossing be protected by red and green lights coupled with a continuously ringing warning bell. These would be track operated.

This problem has always been with the railways, and it is high time that they parted with some cash to provide adequate protection to those who use the crossings. In so doing they would be looking after their own interests too.

Yours faithfully,

G. RICHARD PARKES

Montcroft, School Lane,  
Formby, Liverpool

[The problem of occupational crossings, which includes that of the lack of care exercised by many who use them, is discussed in the report for 1953 of Lt.-Colonel G. R. S. Wilson, Chief Inspecting Officer of Railways, Ministry of Transport, the subject of an editorial article on page 508.—Ed., R.G.]

### Suburban Train Services in the London Area

October 18

SIR,—Mr. Calvert's plea in your October 15 issue for a reorganisation of Paddington-Reading local train services, similar to that carried out in the Birmingham area, should be well supported by many suburban travellers in the Western Region.

The following example from the present morning peak schedules illustrates the need for a more regular service with better co-ordination of slow and semi-fast trains. Ealing Broadway is an important inter-change station, the terminus of London Transport District and Central Lines, served by eight bus and trolleybus routes. If fully used, it could provide convenient travelling between West London and the Slough area, saving the extra time and expense in travelling to and from Paddington.

There is at present, however, no means of arriving at Ealing between 7.50 and 8.55 a.m. by any up train from either Burnham or Taplow, both less than 17 miles away. In the same period there is only one up route, with changes, from Slough and Windsor to Ealing Broadway, the total journey time from Slough to Ealing (12½ miles) being 44 min., and from Windsor to Ealing (15½ miles) exactly one hr.

Yours faithfully,

D. T. CATLING

Abbey Cottage, Poyle Lane,  
Burnham, Bucks.

**ROAD HAULAGE CAPITAL LOSS.**—The Transport Act, 1953, required that the Minister of Transport & Civil Aviation should make a provisional estimate, not later than September 30, 1954, of the total amount falling to be paid to the British Transport Commission in respect of the road haulage capital loss, as defined in the Act, on the disposal of the road haulage undertaking of the Commission. The amount of this estimate was announced by the Minister, Mr. John Boyd-Carpenter, in a written answer to a parliamentary question recently as £20,000,000. This sum is to be paid to the Commission over a period of five years in annual instalments, the first being due, under the terms of the Act, on January 1, 1955. A further amount of £1,000,000 is to be paid for the loss from disturbance suffered by the Commission during the process of disposal. There are provisions in the Act for the adjustment of the total amount if this should prove necessary. The transport levy which forms the source of these payments has yielded £3,789,000 during the first eight months of operation and seems adequate for the purpose. The most serious aspect is the loss of revenue to the Commission from these sales.

## THE SCRAP HEAP

### Quicker by Rail

From a recent information bulletin: "A helicopter service will be opened between Waterloo and London Airport. The fare is 30s. and the trip takes 18 months."—*Peterborough in "The Daily Telegraph."*

### Horse Lovers

Commenting on the withdrawal this year of the last horse from British Railways cartage services in Dublin, Mr. F. W. Moxon, Assistant (Cartage) to the Commercial Superintendent, London Midland Region, protests indignantly at the suggestion that there is cruelty in "doing away with horses." He says that when British Railways have a fairly young horse in a city, it is taken to an area where mechanisation has not yet taken over, and replaces an older horse. If and when this horse is killed, a veterinary official of the railways is there; Our Dumb Friends' League and the Blue Cross are also represented. Mr. Moxon also remarks: "You see, people seem to be still very much interested in horses."—*"Quidnunc" in "The Irish Times."*

### Shay Locomotive Still in Service

Reference was made in the Scrap Heap of July 30 to a Shay geared locomotive built by Lima in 1945 for the Western Maryland Railroad and presented this year to the Baltimore & Ohio Railroad transportation museum at Mount Clare.

The Shay locomotive in the accompanying illustration, sent us by a correspondent, is still—or very recently was—in the service of a lumber company. This locomotive is very similar to the Western Maryland engine mentioned above. Our correspondent states that there are a good many such engines still in service in many parts of the U.S.A.; they are used mainly by lumber companies and in industrial plants

where sharp curves and steep gradients were factors determining the adoption of this type of engine.

### Owls' Welfare Service

New facts about the behaviour of birds are so rare that the case of a tawny owl found injured between the railway lines west of Lancing Station, in Sussex, seems to deserve notice by naturalists. . . . Grounded by a broken wing, it was found surrounded by dead mice, presumably brought by other owls to feed it. Perhaps these benefactions had been from relatives, but is it possible that, in some cases, a sort of welfare service operates. . . . A kindly Lancing signalman is now nursing the invalid. . . . It is making a good recovery.—*From "The Manchester Guardian."*

### Investment in the Railways, 1854

It is a disheartening circumstance that our railways, on which not much less than £300,000,000 have been spent, should not have been as amply remunerating to the individual shareholders as they have been . . . a prodigious advantage to the public. They are certainly the noblest enterprise that private men ever accomplished, except the sister undertaking in the United States, if they do not surpass all that has ever been achieved by any Government. The failure is the more to be deplored inasmuch as we can only reasonably hope for continued improvements by the exertions of private men; and if they be inadequate successfully to construct such works, and if such works be not profitable, we cannot expect that in future they will be undertaken. A fairer prospect, however, of great pecuniary advantages to individuals, to be derived from a vast public improvement, never dawned on the nation than when the shares of our leading lines ranged in 1845 from 8 to

10 per cent. No contradiction was found if that to the all-important axiom, that projects for public improvements are not worth entertaining which are not profitable to individuals; and the first success only gave . . . a powerful impulse to the great and necessary work of supplying the land with railways. No person can now suppose that this work will be completed till railways are carried here, like canals in Holland, to every farmhouse in the land. They have superseded, or are superseding, common roads, and districts without rails will speedily labour under nearly all the disadvantages which heretofore belonged to the total want of communication.—*From "The Economist," October 21, 1854.*

### Changes at Cannon Street

Cannon Street Station, once remarked a friend who had never been to Italy, reminded him of Italy. Those less imaginative think that the only thing that the station reminds them of is the station. They acknowledge that seen from afar it might resemble the skeleton of an airship hangar, a vast Nissen hut denuded of its steel flesh. But changes are to be made at Cannon Street.

By 1956—90 years after the Cannon Street Extension Railway first crossed the Thames—it is hoped that the station will be almost entirely rebuilt.

Still undecided, apparently, is the fate of the brace of gilded statues each in its niche a hundred feet or so above the main interior wall of the station—high enough, in fact, for one not to look at them.—*From "The Scotsman."*

### The Turning Wheel

(See recent publicity re machines for cleaning engine wheels)

Since Man sloughed off primeval slime He's been at war with grease and slime. But now (according to my paper) He has abandoned brush and scraper And one more progress point has been Awarded to a mere machine.

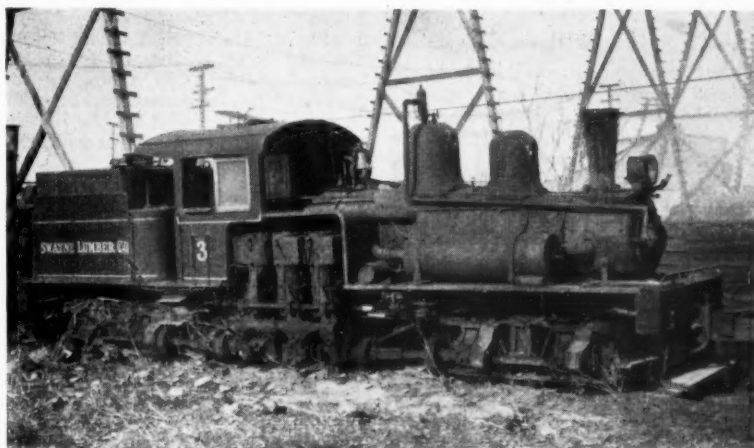
Granted Man's duty to his neighbour Demands a better use of labour, One day, no doubt, he will devise Ingenious means to exorcise The curse of Adam from the earth And live in ease—for what that's worth.

But should each labour-saving plan Be noised abroad? Should helpless man,

When at long last he may contrive Some means whereby he may derive Some joy in life, be so betrayed By tidings cunningly conveyed?

Since human nature still remains Doubtful of progress and retains Intuitive suspiciousness Of other people's idleness. The odds are that these railmen's spouses Will find them jobs around the houses!

A. B.



Photo]

[A. J. Richards

Shay locomotive, one of many still in service in the U.S.A.

## OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

### RHODESIA

#### South-East Connection

Good progress is being made in the construction of the new south-east line from Bannockburn to the Indian Ocean at Lourenço Marques. Over 50 miles of 80-lb. flat-bottom track have already been laid with the aid of a new rail-laying train, capable of handling 40-ft. lengths of prefabricated track with steel sleepers. It consists of 11 bogie rail-wagons each fitted with a pair of carrier rails laid longitudinally to 5-ft. gauge and linked to the rails on adjacent wagons by bridging rails, so that a continuous slide-track the length of the train is provided.

Six 40-ft. lengths of track are loaded on each wagon and the rake is then pushed up to a crane wagon at rail-head, and the carrier rail track is coupled up to a similar-gauge carrier length on the crane wagon. The six lengths of track on the leading wagon are drawn forward by winch on to the crane wagon and the top length is lifted by the crane on to the track bed, there to be fished up. The train then moves forward and the operation is repeated with the other five lengths, and subsequently the next six lengths are winched forward from the second wagon and similarly treated, the process continuing until the whole train is unloaded. One platelayer, one crane operator, and 18 Africans thus lay 66 40-ft. lengths in four hours.

### NEW ZEALAND

#### More Passenger Travel

Twelve million passengers were carried by the New Zealand Railways in the six months from the beginning of April to the end of September, compared with 10,500,000 in the same period last year.

The increased passenger traffic meant an average of £3,800 more revenue in each week of the six months, representing a 10 per cent increase on revenue for the same period last year.

### WESTERN AUSTRALIA

#### Coogee-Kwinana Line

By an agreement between Australasian Petroleum Refinery Limited and the Western Australian State Government with regard to facilities serving the new refinery at Kwinana, on Cockburn Sound, the State undertook to provide rail access to the company's boundary within 12 months of notice of requirement being given.

The nearest railhead was at Coogee, approximately five miles south of Fremantle, and eight miles north of the refinery site. The survey to the refinery follows the coastal limestone strip, in certain sections being 2-3 ch. from the

sheltered coast line of Cockburn Sound. The ruling gradient is 1 in 150, the minimum radius of curvature 10 ch. and the route mileage 8 m. 22 ch.

So far, the company has not exercised its right to the provision of the railway, but meanwhile the Broken Hill Proprietary Company has established itself to the north and east of the refinery and its agreement with the Government provides for rail access. As a result the construction is progressing to these works, and final connection to the refinery can be made at a later date if required. It is probable that an industrial and harbour area will develop in the Kwinana area and extension may be carried farther south.

The present construction is of single line and 63 lb. Australian Standard 'B' rail in 45-ft. lengths, on 6 ft. 6 in. sleepers (2112 per mile) in gravel ballast. Electric staff working will be in force on the section, which should be in service by the end of this year.

### UNITED STATES

#### New Hospital Coaches

The Department of the Army has announced three new types of self-sustaining hospital coaches designed for overseas service, and constructed to run on any standard-gauge railway in the world. They are a car for the medical staff, an ambulance car which has a capacity of 30 patients, and a kitchen-dining-storage car able to feed 150.

All the cars are self-sustaining with light, water, forced ventilation, and heat so that in an emergency they can be placed in a siding for short layover periods. The ambulance car is air conditioned. The stock was constructed at the St. Charles, Missouri, shops of American Car & Foundry, Inc.

### CANADA

#### C.N.R. Diesel Developments

The Canadian National Railways have ordered a twin railcar set from the Budd Company, Philadelphia, for operation between Quebec City and Chicoutimi. Each car is to be of the usual stainless steel construction powered by two G.M. 275-b.h.p. engines driving through hydraulic transmission; but one car is to seat 89 passengers and the other is devoted to mail, baggage, parcels and light goods. This set is to replace steam traction on the thrice-weekly service.

Also the C.N.R. has introduced diesel locomotive haulage over the main line from Montreal to Halifax, N.S., using the first few of 38 passenger locomotives of 1,750 b.h.p. ordered some time ago from Canadian builders. These units have full train-heating equipment installed. The "Ocean

Limited" train between Montreal and Halifax is being made up at the moment of seven of the new types of coaches of which 359 have been introduced since January, 1954. The make-up is a dining car, a dinette car, a deluxe coach, a parlour-grill car, and three sleeping coaches. The dinette car serves lower-priced meals, and has a 50-ft. counter with accommodation for 25 persons. This car also has sleeping accommodation for six members of the crew.

### SWITZERLAND

#### Gotthard Main Line Doubling

The only sections of the busy Gotthard main line of the Federal Railways which still remain single track are those from Lucerne to Immensee (which in effect carries half the traffic only, the remainder using the Arth-Goldau-Zug-Zurich line), and from Melide to Maroggia-Melano. The latter includes the section carried by a causeway across the Lake of Lugano from Melide to Bissone. Widening of this causeway, which carries the main road also, would be costly, but the length of the single track is now being curtailed by a widening between Bissone and Maroggia-Melano. This requires boring a second tunnel at Bissone, and the rearrangement of the lines at the north entry to Maroggia-Melano station, as well as a new signalling installation at the end of the causeway at Bissone, all of which are now in hand.

#### Monthey-St. Gingolph Electrification

A section of line in the Lausanne District which until recently has remained steam-operated has now been electrified; the changeover took place on October 1. This is the branch on the south side of the Lake of Geneva, which leaves the Simplon main line at St. Maurice, and runs westwards through Monthey to the French frontier at St. Gingolph, where it links with the S.N.C.F. line to Evian and Geneva. As far as Monthey, 4½ miles, the branch has been electrified for some time, and it is the work on the remaining 12½ miles to St. Gingolph which has now been completed.

### WESTERN GERMANY

#### Secondary Lines

As part of its general rationalisation plans the Federal Railway has closed some secondary sections, so far up to a length of about 48 miles. On other sections totalling 171 miles passenger services have been withdrawn and the equipment in consequence simplified. It is intended to close completely nine more sections totalling 73 miles and withdraw passenger services from 29 more, totalling 226 miles.



## Postwar Speed Recovery in Great Britain

*To the present time the number of British long-distance train services which have re-attained their full prewar speed is comparatively small, notwithstanding the substantial accelerations of the past year*

(By a correspondent)

THE timetables of British Railways which came into operation on September 20 are to remain in force until June 12 of next year, ten years after the conclusion of the war, and the time is therefore appropriate to review the progress that has been made in restoring long-distance passenger services to their prewar speed and frequency. Two tables are annexed, one showing the fastest scheduled times in force between London and a representative selection of 30 cities and towns in different parts of England and Scotland, and the other the average times and speeds of the twelve best daily trains over the routes concerned.

In Table 1 it will be seen that on three

progress between Shenfield and Chelmsford. The second faster train is the "Atlantic Coast Express" of the Western Section, Southern Region, running from Waterloo to Exeter in 7 min. less than its prewar time, and with a booking of 83 min. over the 83.7 miles from Waterloo to Salisbury. The third is the "Pembroke Coast Express," whose timing of 3 hr. 55 min. from Swansea to Paddington is 2 min. faster than any in force before the war.

### Western Region Accelerations

The Western Region also has been responsible for restoring to its timetables the first train at prewar streamline speed. This is, of course, the

has been made in as little as 97 min., and on one occasion in 95 min., and early arrivals at both terminals have been frequent. On a number of up journeys, also, an average speed of 80 m.p.h. has been maintained for from 90 to 100 miles continuously. The 2-hr. Paddington-Birmingham times also equal the best in the prewar timetables.

Apart from these, all the fastest times tabulated are slower than before the war. The Eastern and North Eastern Region times show some particularly notable declines, due to the fact that the prewar "Silver Jubilee," "Coronation" and "West Riding Limited" streamline trains have not reappeared in the timetables; the "Elizabethan" certainly brought the Kings Cross-Edinburgh time down to 6½ hr. during the summer, but this was for a period of seven weeks only, and the withdrawal of this service has meant a deceleration for the remainder of the year of no less than 60 min. in the best London-Edinburgh time. On the London-Midland Region, on the other hand, although the 7½ hr. of the up "Royal Scot" is still 45 min. slower than the 6½ hr. of the prewar "Coronation Scot," this train is retained without any increase of time in the present winter service.

What is of more importance than the fastest times on each service are the average times and speeds of the service as a whole, and these are set out in Table 2. Here the best showing is made by the Southern Region, although it will be noted that the average speeds in general are lower than those of most of the other services tabled. The Waterloo-Southampton service is one of the only two in the entire table that show no decline from the prewar speeds; in the case of Bournemouth, Exeter, and Portsmouth the deceleration is no more than 1 per cent or less, and the only S.R. service which is substantially slower than before the war is that along the Kent Coast, to and from Margate and Ramsgate. From London to Margate one train only (the 5.15 p.m. from Cannon Street) is timed at an average speed of more than 40 m.p.h., actually 43.8 m.p.h.

The Western Region also in general makes a good showing; the service between Paddington and Plymouth is only 0.8 per cent slower than before the war, and, incidentally, is much more conveniently spaced out; and the Bristol, Birmingham, and Cardiff services are within from 3.3 to 3.5 per cent of their prewar times. Although the quickest Swansea time is less than before the war, however, the average

TABLE 1  
FASTEST SCHEDULED TIMES BETWEEN LONDON AND PROVINCIAL CITIES AND TOWNS  
WINTER, 1938-1939 AND 1954-1955

Region	Town	Distance Miles	1938-1939		1954-1955		1954-1955 Slower (+) or faster (-)
			Time	Speed	Time	Speed	
			Hr. Min.	M.p.h.	Hr. Min.	M.p.h.	Per cent
L.M.R.	Leicester	99.1	1 39	60.1	1 41	58.9	+ 2.0
	Nottingham	123.5	2 03	60.2	2 16	55.1	+ 10.6
	Birmingham	112.9	1 55	58.8	2 00	56.5	+ 4.3
	Sheffield	158.5	2 56	54.0	3 14	49.0	+ 10.2
	Manchester	188.5	3 15	58.0	3 20	56.6	+ 2.7
	Liverpool	193.7	3 15	59.6	3 25	56.7	+ 5.2
	Leeds	198.0	3 48	52.1	4 32	43.7	+ 19.3
	Glasgow	401.4	6 30	61.8	7 15	55.0	+ 11.5
	Perth	449.9	9 19	48.3	9 33	47.1	+ 2.5
E. & N.E.R.	Leicester	103.1	1 48	57.3	2 09	47.9	+ 19.4
	Norwich	115.0	2 10	53.1	2 03	56.1	- 5.4
	Nottingham	126.5	2 16	55.8	2 43	46.6	+ 19.8
	Sheffield*	164.7	3 06	53.1	3 10	51.0	+ 2.2
	Leeds	185.7	2 43	68.4	3 15	57.1	+ 19.6
	Newcastle	268.4	3 57	67.9	4 33	59.0	+ 15.2
	Edinburgh	392.9	6 00	65.5	7 30	52.4	+ 25.0
	Aberdeen	523.4	9 45	53.7	11 36	45.1	+ 18.9
W.R.	Birmingham	110.6	2 00	55.3	2 00	55.3	+ 0.0
	Bristol	118.3	1 45	67.6	1 45	67.6	+ 0.0
	Worcester	120.4	2 10	55.6	2 27	49.1	+ 13.1
	Cardiff	145.1	2 41	54.1	2 45	52.8	+ 2.5
	Swansea	190.0	3 57	48.3	3 55	48.7	- 0.9
	Torquay	199.7	3 30	57.1	3 35	55.7	+ 2.4
	Plymouth	225.5	4 05	55.2	4 15	53.1	+ 4.1
S.R.	Margate	73.9	1 30	49.3	1 38	43.8	+ 8.9
	Portsmouth*	74.5	1 35	47.0	1 36	46.6	+ 1.0
	Dover†	78.4	1 40	47.0	1 41	46.6	+ 1.0
	Southampton‡	79.2	1 25	55.9	1 28	54.0	+ 3.5
	Bournemouth‡	107.9	1 56	55.8	2 05	51.8	+ 7.8
	Exeter‡	171.8	3 12	53.7	3 05	55.7	- 6.2

\* Harbour station.

† Priory station.

‡ Central station.

§ From Kings Cross via Retford, 161.5 miles.

¶ From Marylebone.

|| From Cannon Street, 71.5 miles.

services only is there a faster train in 1954 than any operating before the war. Of these three the most notable example is the "Broadman" of the Great Eastern Section, Eastern Region, allowed 2 hr. 3 min. from Liverpool Street to Norwich with a 2 min. stop at Ipswich, and required to cover the 46.3 miles from Ipswich to Norwich in 44 min. start to stop; the normal allowance of this train is 2 hr. (57.5 m.p.h.), but this is temporarily increased by 3 min. because of the electrification work in

"Bristolian," booked at 67.6 m.p.h. from Paddington to Bristol via Bath, and at 67.2 m.p.h. in the reverse direction via Badminton. The exemplary timekeeping of this train since its restoration has shown that in present postwar conditions the maintenance of such speeds still entails no exceptional locomotive or operating difficulties; moreover, as the present schedules in both directions include 8 min. of "recovery margins," there have been a number of occasions on which the run

time is 10.2 per cent longer, and Worcester service is equally backward in recovery.

In the Eastern and North Eastern Region list, the outstanding service, and the only one in the entire table to show an improvement on the prewar figures, is that between Liverpool Street and Norwich, which as a whole is 8.6 per cent faster than before the war. In the London Midland Region table the Euston-Manchester service now closely approaches its prewar speed and the services between Euston and both Liverpool and Glasgow are nearly back to the prewar level. If the Eastern and North Eastern Region streamline trains were restored, the services between Kings Cross and Leeds, Newcastle, and Edinburgh also would approximate fairly closely to their prewar speeds also.

But the most marked decline has been in the service now offered by both the London Midland and Eastern Regions to the Midland cities of Leicester, Nottingham, Sheffield, and, in the case of the L.M.R., to Leeds, which provides the most disappointing figures in the whole table. It may be argued that the Eastern Region service between London and Leeds also is at the disposal of the traveller, but this does not affect the communications between Bradford and Leeds and such cities as Leicester and Nottingham. It must be admitted that speed restrictions through the mining areas between Nottingham, Sheffield, and Leeds are a serious handicap; between Nottingham and Sheffield they account for 8.9 min. average increase in overall journey times, and between Sheffield and Leeds (L.M.R.) for

TABLE 2.  
AVERAGE TIME AND SPEED OF 12 FASTEST DAILY TRAINS BETWEEN LONDON  
AND PROVINCIAL CITIES AND TOWNS, 1938-1939 AND 1954-1955  
(Winter Service, trains starting between 7 a.m. and 8 p.m.)

Region	Town	Distance	1938-1939		1954-1955		1954-1955 Slower (+) or faster (-)
			Time	Speed	Time	Speed	
		Miles	Min. sec.	M.p.h.	Min. sec.	M.p.h.	Per cent
L.M.R.	Leicester	99.1	1 39	60.1	1 55	51.7	+ 16.2
	Nottingham	123.5	2 14	55.3	2 34	46.5	+ 14.9
	Birmingham	112.9	1 57	57.9	2 04	54.6	+ 6.0
	Sheffield	158.5	3 04	51.7	3 37	43.8	+ 18.0
	Manchester	188.5	3 35	52.6	3 40	51.4	+ 2.3
	Liverpool	193.7	3 35	54.1	3 45	51.7	+ 4.7
	Leeds	198.0	4 02	49.3	4 59	39.7	+ 23.6
E. & N.E.R.	Glasgow (e)	401.4	7 57	50.5	8 19	48.2	+ 4.6
	Perth (e)	449.9	9 49	45.8	10 23	43.3	+ 5.8
	Leicester (d)	103.1	1 59	52.0	2 18	44.8	+ 16.0
	Norwich (d)	115.0	2 31	45.7	2 18	50.0	- 8.6
	Nottingham (d)	123.5	2 29	50.9	2 54	43.6	+ 16.8
	Sheffield	164.7	3 19	49.7	3 49	43.2	+ 15.1
	Leeds	185.7	3 27	53.8	3 42	50.2	+ 7.2
W.R.	Newcastle	268.4	4 43	56.9	5 03	53.2	+ 7.6
	Edinburgh (g)	392.9	7 29	50.5	7 56	49.5	+ 6.0
	Aberdeen (e)	523.4	11 17	46.4	12 24	42.2	+ 9.9
	Birmingham	110.6	2 03	53.9	2 07	52.2	+ 3.3
	Bristol	118.3	2 04	57.2	2 07	55.9	+ 3.3
	Worcester	120.4	2 31	47.8	2 47	43.3	+ 10.6
	Cardiff	145.1	2 53	50.3	2 59	48.6	+ 3.5
S.R.	Swansea	190.9	4 06	46.6	4 25	43.2	+ 10.2
	Torquay	199.7	4 05	48.9	4 15	47.0	+ 4.1
	Plymouth	225.5	4 45	47.5	4 47	47.2	+ 0.8
	Margate (f)	73.9	1 43	42.3	1 54	38.1	+ 10.7
	Portsmouth (a)	74.5	1 35	47.0	1 36	46.6	+ 1.0
	Dover (b)	78.4	1 52	42.0	1 54	41.2	+ 1.8
	Southampton (c)	79.2	1 31	52.2	1 31	52.2	+ 0.0
	Bournemouth (c)	107.9	2 14	48.0	2 15	48.0	+ 0.7
	Exeter (cd)	171.8	3 40	46.9	3 42	46.4	+ 0.9

(a) Harbour station.

(b) Priory station.

(c) Central station.

(d) 10 trains daily only.

(e) 8 trains daily only and includes night trains.

(f) Includes trains to and from Cannon Street, 71.5 miles.

(g) Includes night trains.

15-16 min. additional. On the other hand, such restrictions do not affect the times between London and Leicester or Nottingham.

Examination of the timetables shows that in both frequency and speed, the

train services of 1954-55 between London and Leicester, Nottingham, and Sheffield are considerably inferior to those of the 1904-1905 winter, 50 years ago, and it is here that the most drastic improvements seem urgently needed.

**SOLDERLESS WIRING CONNECTIONS.**—To overcome the disadvantages in soldered joints, the Plessey Co. Ltd. have developed the principle of a solderless wiring connection which ensures a reliable joint regardless of the skill of the operator. The Plessey system was evolved primarily for use in the aircraft industry, but is now being extended to a wider field of industrial application. There are two types of solderless crimp-indentation and hexagon. In the indentation type, the solderless wiring connection is made by manually crimping opposite sides of the connection tag so that the wire connector is gripped immovably. The second type, the hexagon, is a later development, and was designed to take any size of wire for crimping, and is also suitable for use with aluminium cables. A cable terminal joint made by these methods is said to possess good electrical continuity, and has the ability to withstand heavy vibration.

**LONDON MIDLAND REGION PIGEON TRAFFIC.**—Nearly 1,500,000 pigeons were taken to race starting points from stations in British Railways London Midland Region, during the 1954 season. Birds travelled in 1,481 vans, each containing about 60 baskets of pigeons. Some went by the normal passenger services, but most by 87 special trains, eleven more than last year, when over 1,300,000 pigeons were carried. In addition, many thousands were taken in small consignments to release points for

training flights. Racing pigeons are taken to a variety of destinations in Great Britain and the Channel Islands and to places on the Continent such as St. Malo, Nantes, and Fontenay. Officials from the pigeon racing federations travel with the special trains to water and feed birds and supervise their release for the race home.

**RAPID HAMMER EQUIPMENT.**—Adam & Harvey (Rapid Hammer) Limited, of Newgate Street, London, E.C.1, will be exhibiting developments in its range of Rapid Hammer equipment at the Public Works Exhibition at Olympia, London, W.14, on November 15-20. The principle features of the new equipment are quietness of operation, and the incorporation of a universal protective shield for the safety of operators. The larger model is now made to use  $\frac{1}{2}$ -in. dia. bolts, besides the normal  $\frac{1}{4}$ -in. and  $\frac{3}{8}$ -in. dia. bolts.

**CLASSES ON PORT WORKING.**—Classes especially designed for port workers are being held at technical and commercial colleges in nearly all the port areas of the United Kingdom. The subjects are port working, port traffic, and port organisation and finance. They have the support and co-operation, inter alia, of the National Joint Council for the Port Transport Industry, the Dock & Harbour Authorities Association, the British Transport Commission and the Institute of Transport.

Examinations are not an essential part of the scheme but can be arranged for those who wish to obtain the certificates awarded by the Institute of Transport, from which further particulars may be obtained. Information on local classes is obtainable from technical or commercial colleges, trades unions, and the National Dock Labour Board.

**WITHDRAWAL OF SIDING FACILITIES IN SCOTLAND.**—Monifieth Public Siding, Scottish Region, was closed on November 1; alternative rail facilities are available at Monifieth Station. On the same date the livestock facilities were withdrawn from Summit Public Siding, Beattock; alternative facilities are available at Elvanfoot Station.

**BIRMINGHAM ELECTRONICS EXHIBITION.**—An exhibition, under the title "Electronics at Work," to be held at the Chamber of Commerce Hall, New Street, Birmingham, on November 23-25, will be opened by the President of the Institution of Production Engineers, Sir Walter Puckey. The Lord Mayor of Birmingham will also attend the opening ceremony. A wide range of exhibits will be shown which have applications in industrial and agricultural fields. The exhibition is being held under the auspices of the Scientific Instrument Manufacturers Association of Great Britain Limited.

## Diesel-Electric Mobile Crane

*Motors energised by d.c. current from a generator direct-coupled to the diesel engine*



*The cab of the Leander mobile crane; the driver's swivel seat is in its forward and driving position*

**A** LORRY-MOUNTED, full-slewing, diesel-electric crane particularly adaptable for loading and unloading railway wagons has been added to the range of cranes designed and manufactured by Steels Engineering Products Limited. The crane, known as the L910, is in service in the Eastern Region, British Railways, and the accompanying illustration shows the crane unloading a container at Great Yarmouth Goods Depot.

It is fully mobile, with all crane motions (hoist, derrick, slew, and travel) operated from the one cab, which is fitted with a 180-deg. swivel seat. Cab design is such as to afford the operator an unobstructed view when carrying out any of the above operations. All four motions are operated by separate electric motors energised by d.c. current from a generator direct-coupled to a diesel engine mounted on the chassis. Electric power is carried up through the hollow centre pillar and is transmitted via a rotary collector column to the hoist, derrick, and slew motors on the revolving superstructure. The grouped finger-tip controls are positioned for fatigue free operation over long periods.

### Lifting Capacity

The lifting capacity is seven tons at 10-ft. 6-in. radius, with a 20-ft. centres jib. The jib is of cantilever lattice type. Optional jibs from 20 ft. up to 40 ft. in ranges of 5 ft. can be supplied if required. The capacities are in accordance with B.S.S. No. 1757. Automatic self-resetting switches, fitted to the hoisting and derricking motions, protect the machine and load, should

attempts be made to hoist or derrick beyond the permitted limits. A radius indicator shows the maximum loads at the different radii and an automatic safe load indicator is fitted to warn the operator of tendency to overload the crane, irrespective of position of the jibs and automatically prevents lifting or derricking of an unsafe load.

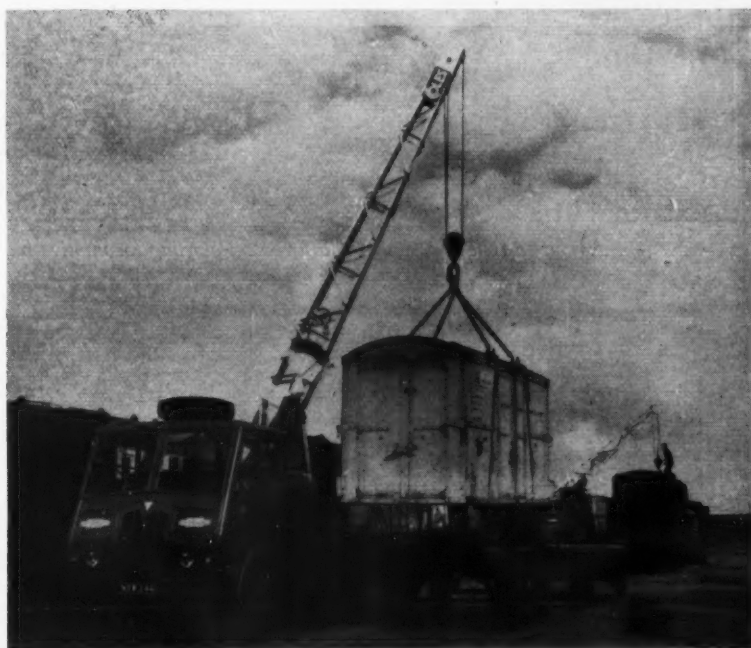
The power unit driving the generator is a Perkins P6 diesel engine, developing 63 h.p. at 2,000 r.p.m. The variable-voltage electric motors which are specially designed with high-torque low-speed characteristics and tropically insulated, provide an infinite range of speeds. The advantage claimed for this type of transmission is reduced maintenance, because of the elimination of wearing parts used in mechanical transmission.

Reduced fuel consumption is claimed because the diesel engine is not kept running at constant high speed, but power is developed according to the actual need, and used efficiently when required, neither can the engine be stalled since no shocks are transmitted to it—all speeds are adjusted to the load, in accordance with the needs of safety. Electric transmission also provides very smooth acceleration and deceleration during hoisting and lowering.

### Automatic Braking

Electro-mechanical brakes are applied automatically to the hoisting, derricking, and slewing motions should the supply of current be interrupted either accidentally or intentionally. In no case does the load pass over the head of the operator. The hoisting speeds are 90 ft./min. with 1½ tons, 120 ft./min. with one ton, and 150 ft./min.

*(Continued on page 519)*



*The Coles L910 Leander mobile crane shown handling road-rail containers in the goods yard at Great Yarmouth, Eastern Region, British Railways*



## Oil-Burning Locomotives for Bolivia

*Designed to negotiate a minimum curve of 246 ft. with a tractive effort of 33,240 lb. at 85 per cent boiler pressure*

**A**MONG the locomotives being constructed at the Newton-le-Willows works of the Vulcan Foundry Limited, are 16 4-8-2s for the Antofagasta (Chili) & Bolivia Railway Co. Ltd. They are equipped for oil burning and are capable of negotiating a minimum curve of 246 ft. The tractive effort is 33,240 lb. at 85 per cent boiler pressure, and the boiler has been designed to ensure an adequate supply of steam on the long grades prevailing on the railway.

### Boiler Design

The boiler barrel consists of three courses, and the firebox is of the Bel-paire type with an inner box of steel of all-welded construction. The front four rows of crown stays are of the flannery flexible type and the water space stays

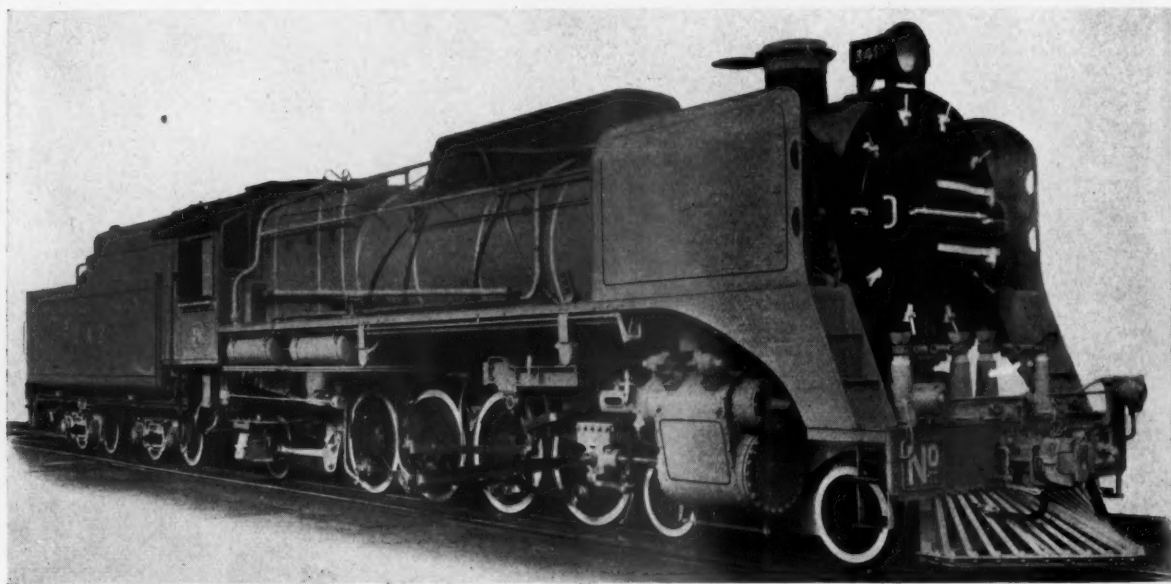
are of Longstrand steel with flexible stays in the breaking zones. The large tubes,  $5\frac{1}{2}$  in. outside dia. by 8 s.w.g., are of solid-drawn steel, while the small tubes,  $2\frac{1}{2}$  in. outside dia. by 11 s.w.g., are electric resistance welded. The tubes are fitted into copper sleeves in the fire-box tubeplate, and are beaded over and sealed by welding. The boiler barrel and firebox are completely clothed with 1-in. thick asbestos mattresses.

The boiler has a cylindrical smoke-box of large capacity, and the chimney is provided with a damper operated from the cab. A shut down valve is arranged in the dome. A Superheater Co. Ltd., Melesco type, superheater header is fitted, incorporating a multiple valve regulator. The ends of the superheater elements are 3 ft. 6 in. from the firebox tubeplate. The oil burner

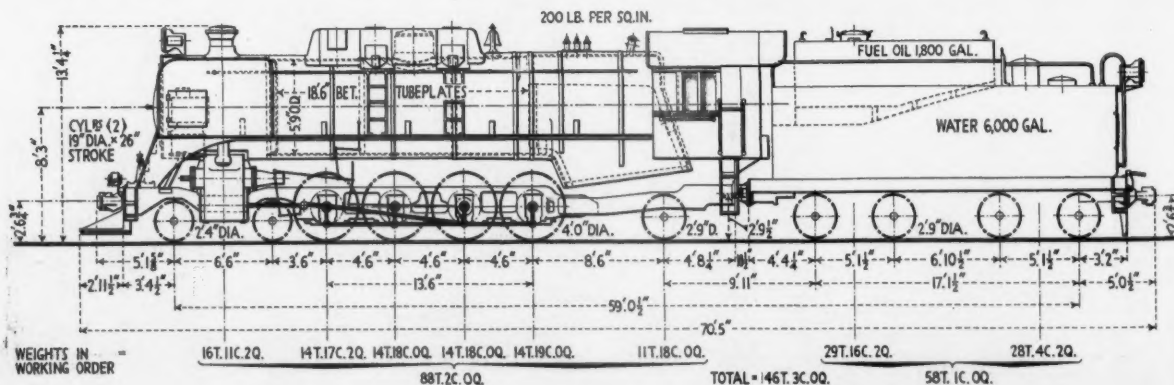
is of the railway's standard pattern and is located in the front of the flamepan, which is of mild steel plate and all-welded.

There are four air doors, one on each side of the flamepan, and one in front of the subsidiary hopper below the main pan. The doors are independently operated from handles on the fireman's side of the cab. The fourth door is at the front of the main pan immediately below the burner. The boiler mountings include a No. 12 Friedman-type live-steam injector on the right-hand side, and a No. 11 class H/J exhaust steam injector complete with water regulator handle and grease separator on the left-hand side.

Both injectors are located under the cab platform and deliver water to top-feed clackboxes on the first barrel;



*Antofagasta (Chili) & Bolivia Railway oil-burning locomotive built by Vulcan Foundry Limited*



*Diagram showing the principal weights and dimensions of the locomotive*

feed trays are fitted. Equipment includes three 2½-in. dia. Ross pop safety valves, two K.B.VI. Klinger reflex water gauges with 9 in. sight, two Everlasting blow-off cocks located one on each side of the firebox above the foundation ring and steam heating equipment. A blower valve, and 4-in. diameter pressure gauge are mounted on the oil equipment manifold. A steam stand is fitted on the firebox top outside the cab. Ten of the locomotives for the Chilean section are fitted with Smith-Stone speed indicators, and the six for the Bolivian section are fitted with Teloc RT220, speed indicators and recorders.

### Engine Particulars

The engine main frames consist of 4-in. thick slabs extending to below the front of the firebox. The rear frames are 2 in. thick, and are set in to allow for the swing out of the hind truck wheels when on sharp curves. A Henricot automatic coupler type IX.M6 is fitted on the front buffer beam. The cylindrical smokebox is supported on the smokebox saddle at the front, and on slides at the front and rear of the firebox. Three breather plates are arranged under the barrel, and the frames are well braced by steel castings.

The spring gear is compensated in two groups, the front groups include the leading and intermediate coupled wheels, and the rear the driving and trailing coupled wheels and the hind truck. Self-Priming Pump & Engineering Co. Ltd. Walter patent, hardened steel split-bushes are fitted to all spring gear eyes. Axleboxes are of cast steel, two sets are fitted with Stone's bronze bearings with Ajax grease lubricators in the keeps, the remainder being arranged for oil lubrication with Stone's bronze and whitmetal bearings and Armstrong oilers fitted in the keeps. Manganese steel liners are fitted at the guide faces. At the hub faces, bronze liners are fitted on grease lubricated boxes, and Ferrobestos liners on oil-lubricated boxes. All the rotating, and 33 per cent of the reciprocating weights are balanced, the latter being equally divided among the coupled wheels.

The leading bogie is of plate frame construction with a steel centre casting incorporating side bearers fitted with manganese steel liners, with Ferrobestos liners on the main frame brackets. Two nests of side control springs are carried in the centre casting. The cast-steel axleboxes are fitted with Stone's bronze and whitmetal bearings. Manganese steel guide liners and phosphor bronze hub face liners are also fitted. The trailing truck is of the Cole pattern with spring side control and outside journals.

The cylinders are of cast-iron, each being cast integral with the half smokebox saddle, and are fitted with cast-iron barrel liners. The pistons are of cast iron, with three narrow cast-iron rings. United Kingdom metallic packing is fitted together with lubricators, and the bye-pass valves are to the railway's standard pattern. Laird type

crossheads are of cast steel with cast-iron shoes inset with whitmetal and gunmetal side liners.

Connecting rods of fluted section are made with solid big ends and adjustable small ends. Fourteen sets are oil lubricated and fitted with Stone's bronze bushes, those at the big end being lined with whitmetal. The remaining two sets are grease lubricated and fitted with Stone's bronze floating bushes. The coupling rods are of plain rectangular section, 14 sets of which are oil lubricated and two sets grease lubricated, bushes are similar to the respective connecting rod big ends.

The same number of motion sets are oil- and grease-lubricated. The oil-lubricated sets are fitted with steel bushes and the grease-lubricated sets are fitted with phosphor bronze bushes. The oil cups are to the railway's standard pattern, the grease nipples being Ajax type B for hard grease, for the crankpin bearings, and Ajax soft grease type for all other parts. A Wakefield Eureka six-feed hydrostatic lubricator supplies oil to the cylinders and steam chests and the Westinghouse pump, and a Wakefield No. 72-14-feed mechanical lubricator feeds all axleboxes on 14 locomotives with oil lubrication and feeds the bogie and truck axleboxes only on the grease lubricated engines.

### Brake Equipment

The Westinghouse brake equipment includes an automatic brake valve for operating the train brake, and a straight brake valve for engine and tender only. Two 8½-in. 120 cross-compound compressors are fitted one on each side of the smokebox, a 16-in. diameter × 9½-in. stroke brake cylinder is mounted between the engine frames, and four 15-in. × 52-in. main reservoirs are carried under the platforms. The brake gear is compensated and fitted with Walter patent hardened steel bushes. Two large capacity sandboxes are incorporated in the casing on the top of the boiler. Operation is by compressed air. Sand is fed to the front of the leading and driving wheels, and to the rear of the driving and trailing wheels.

Current for the electric lighting is provided by a Stone's 24-V. turbo generator. The equipment includes two 14-in. Tonum B. E. headlamps, side lamps on the engine buffer beam, a tail lamp at the rear of the tender, cab lighting, and motion lamps located under the side platforms.

The engine cab is of the enclosed type and is provided with waterproof curtains to cover the rear opening. Louvres are provided for the side openings and adequate provision for ventilation is arranged in the roof. Upholstered seats and armrests are provided for the driver and fireman; in addition to a toolbox, a steel box of 3 cu. ft. capacity carries sand for tube cleaning.

The tender frame is made up of longitudinal rolled-steel channels strongly braced, and fitted with cast-steel drag

castings at front and rear. The hind drawgear consists of a standard Henricot type IX.M6 automatic coupler, fitted with rubber springs. The tender bogie is of the cast-steel type consisting of two double truss frames, and one bolster having centre pivot and brackets for side bearers cast integral, also two coil-elliptic non-harmonic spring groups, each consisting of four coils and one full elliptic. These details were supplied by Davis & Lloyd Limited. The brake hanger brackets and axlebox horn guides were cast integral with the frames.

British Timken, double-cone roller-bearing axleboxes are fitted, and arranged for oil lubrication. The wheels are of the solid disc type; the rims are of sufficient thickness to permit steel tyres to be fitted when the original tread is worn. Westinghouse and hand brakes are fitted. The brake beams are of Sterlingworth pattern, and fitted with Walter patent-hardened steel bushes. The water and fuel tanks are of welded and riveted construction and well braced. Tool boxes are provided at the front and rear of the water tank. The fuel oil tank is equipped with heater coil and strainer. The equipment includes four 25-ton traversing and lifting screw jacks, and one pair of No. 5 Russel double-sided rerailing ramps. The principal dimensions are as follow:—

Cylinders (2)	19 in. dia. × 26 in. stroke
Coupled wheels, dia.	4 ft.
Bogie	2 ft. 4 in.
Trailer truck wheels, dia.	2 ft. 9 in.
Boiler pressure	200 lb./sq. in.
Heating surface:	
Small tubes	1,263 sq. ft.
Large tubes	667 sq. ft.
Firebox	180 sq. ft.
Total evaporative	2,110 sq. ft.
Superheater	457 sq. ft.
Grate area	39 sq. ft.
Tractive effort	33,240 lb.
Adhesive weight	59.625 tons
Factor of adhesion	4.02
Weight of engine in working order	88.1 tons
Tender water capacity	6,000 gal.
oil fuel capacity	1,800 gal.
weight loaded	58.05 tons
Engine and tender in working order	146.15 tons

### Diesel-Electric Mobile Crane

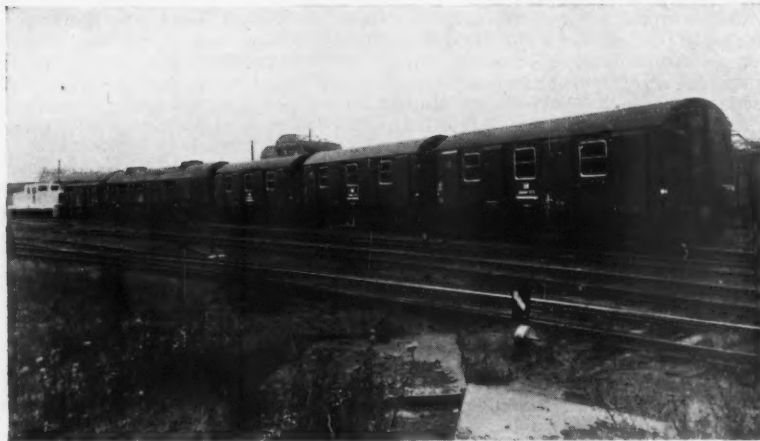
(Concluded from page 517)

with 0.5 tons. Derricking, maximum to minimum radius 20 secs., and slewing two revs. per min. A normal type two-speed gearbox is fitted, and the crane can travel at 2 m.p.h. loaded, and up to 12 m.p.h. unloaded; the turning radius is 25 ft.

Foot-operated, hydraulic 16½-in. dia. brakes are fitted to the front and rear wheels, with a multiple pull ratchet-type handbrake on the four rear wheels. The driver's cab is totally enclosed and has full vision; safety glass opening windows are fitted. Seating is arranged for three, with one swivel seat for the operator. The equipment includes electric starter and horn, instrument panel and dashlight, headlamps, sidelamps, and windscreen wipers. A tool box is incorporated in the chassis with full tool kit.

## Grinding Train for Corrugated Rails

*Corrugations of a maximum depth of .015 in. removed by a single run over the track at 1.8 m.p.h.*



*General view of train hauled by Fried. Krupp Locomotivfabrik diesel-hydraulic locomotive; the three rear vehicles are the grinding cars*

**F**OR a generation or more there has been a steady increase in Germany and other countries of sections of permanent way subject to roaring rail, which is caused by corrugation of rail heads. This deformation of the rail is detrimental both to the rail itself and to rolling stock; it causes loosening between the rail base or chair and the sleeper and induces premature fatigue of rolling stock parts, particularly wheel sets unprotected by springs. Passengers also find roaring rails a nuisance.

Many railway managements have gone to considerable trouble and expense to find a remedy. Today, however, there is still no agreed cause of the deformation producing these effects, and it seems impossible to prevent its occurrence. On most railways exchange of the affected rail is considered uneconomical. The only solution, therefore, seems to be the grinding down of the affected rail heads from time to time.

For many years tramway undertakings have been using rail grinding cars. The efficiency of such grinding cars is relatively low. They move along the track, pressing down grinding stones against the rail head, so planing the track in an attempt to prevent formation of an uneven surface.

This operation, however, is of no avail when a rail already deformed is to be smoothed; or when continuous maintenance of heavily frequented, often electrified sections of track are concerned, as with suburban and underground lines in cities, and the tracks of main-line railways in the vicinity of large stations.

The latest conventional types of grinding car in operation only grind a few thousandths of a millimeter off the rail head. Their smoothing effect is likely

to decrease with the duration of the operation and is diminished by the accumulation of dirt on the rail.

### Size of Corrugations

Ripples reach a height or depth of .0136-.0157 in. and a length of some  $1\frac{1}{2}$ -2 $\frac{1}{2}$  in. The length of corrugations varies considerably and, whilst they are often equal to the distances between sleepers, they may be shorter or much longer. The longest corrugations are not detrimental to rolling stock movement provided they are not in resonance with the suspension. Shorter corrugations should be removed if possible.

As removal of rail deformations by grinding must be effected with minimum interference with traffic, it should be done during a single run-over of the grinding train at the highest speed which

can give the desired result. A substantial grinding capacity is required for this and can be obtained only by the employment of rotary grinding wheels. The requirements then are equal to or in excess of those demanded from a grinding machine tool. The selection of the abrasive is of the utmost importance, and the type of grinding wheel itself must be chosen in the light of certain considerations.

### Disc Wheel

The disc wheel moves along the rail more easily than a dished or cupped grinding wheel. It remains within moving dimensions during grinding and does not foul guide rails in traversing points and curves. When going over crossings it need not be lifted off the rail, so avoiding interruption in the grinding. The straight disc will move readily over rail joints whilst a cupped wheel may hit the next rail ahead with its sharp edge. Finally the straight disc is stronger and, therefore, better suited for greater grinding pressures, faster revolutions, and higher feed or travelling speeds.

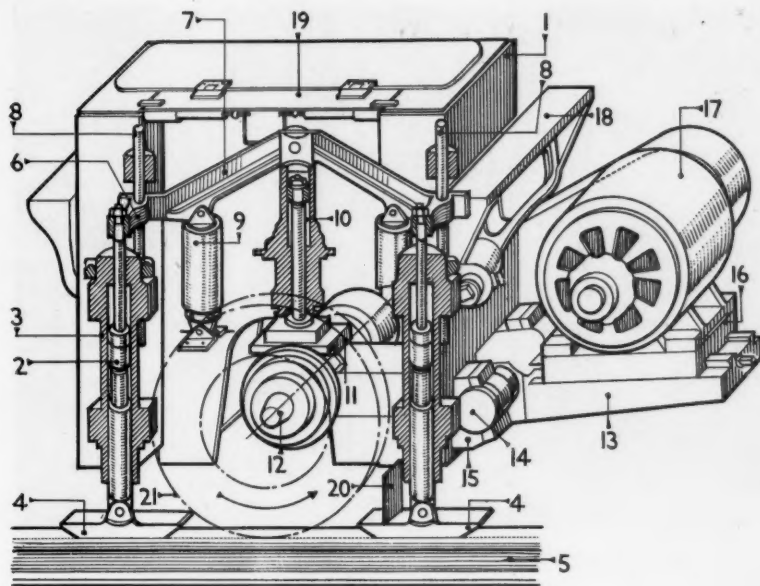
With stationary grinding machines the feeds normally vary about 40-45 ft. a minute, which would be very slow for rail grinding. It has been proved in many trials that in certain conditions this speed can be increased to about 1.8 m.p.h., allowing for a grinding depth of .0015 in.

A further requirement is for the grinding sets to be suitable for trouble-free operation in any weather and to remain unaffected by the large amount of dust and heat generated. The grinding mechanism must be designed and constructed to give heavy-duty service because of the many shocks encountered in shunting and on journeys.



*Heavily corrugated rail before grinding*





Schematic view of grinding unit

1 casing 2 piston 3 compressed air cylinder 4 guide shoe 5 rail 6 connecting bracket  
7 compensating lever 8 guide rod 9 lifting cylinder 10 hydraulic regulating cylinder 11 slide  
block guide 12 grinding spindle 13 carrying bracket 14 axle 15 bearing 16 motor slide  
block 17 18-kW. 18 slide 19 lid 20 grinding dust deflector 21 grinding wheel

The Fried. Krupp Lokomotivfabrik began building grinding cars for light service in the 1930s. Whilst adequate for the light duties for which they were intended the performance of these cars was insufficient for the heavy-duty tasks referred to above. A new type of rail grinding train has since been constructed, and after trials a train was supplied to the German Federal Railway early this year, as stated in an editorial note in our issue of April 16.

#### Low Speed of Run Over

To obtain good results a relatively low travelling speed when grinding of 1.8 m.p.h. is imperative, and this speed must be maintained without variation. Locomotives normally used for general and shunting duties can move at and maintain such a speed only in very few cases.

The grinding wheel is driven by an electric motor and V-belt, and is connected to two guide shoes by means of compensating levers. The shoes are applied against the rail surface by compressed air. This compensating suspension of the grinding wheel assembly makes it independent of any vertical movement, i.e., the suspension of the wagon body. This feature is indispensable for successful grinding operations, as without this independence every vertical movement would be reproduced on to the rail by a corresponding increase or decrease in the grinding depth.

The shoes are so dimensioned that they will glide over the crests of corrugations but not sink into the troughs.

The connection between the shoes and the grinding wheel is made through an oil hydraulic cylinder which, while

allowing for height adjustment, presses the grinding wheel on to the rail head. Such adjustment of height is necessitated by the progressive reduction of the grinding wheel diameter through wear and by the need to provide a cushion if the grinding pressure becomes excessive.

#### Maintenance of Pressure in Grinding

The driving motor runs continuously at full capacity. Any increase in the grinding pressure would, therefore, result in overloading; for instance, on one length of corrugated rail it might be possible at a given moment for both the shoes to be in trough whilst the grinding wheel moves over the crest of the corrugation. Should this happen the pres-

sure increases in the hydraulic cylinder with resultant cushion effect, which allows the grinding wheel to move upwards and prevent overloading and stalling of the motor.

In the opposite case, when the shoes travel over the crests and the grinding wheel is in the trough, there would be no contact between the abrasive and the rail head if the hydraulic cylinder did not counteract the sudden reduction in pressure. For these reasons the position of the grinding wheel in relation to the rail must be adjustable. This adjustment is made automatic by means of an electric control circuit which operates the oil pressure cylinder and lowers or raises the grinding wheel according to the power absorbed by the motor.

The adjustment of the grinding wheel for efficient operation is automatically carried out during grinding. The operator merely has to see to the correct automatic working of the adjustment device and the operation of switches at start and finish of work. The grinding wheel must be able to give way when meeting obstacles, but must not do so too readily as then it might be possible for it to follow the corrugations with the probability that they would not be removed. The device in fact must possess some degree of inertia.

#### Composition of Train

Immediately behind the locomotive is a tool wagon, followed by a van containing two diesel units generating 300 kV.a., with the necessary ancillary equipment for driving the grinding assemblies.

The other three wagons are the grinding cars. They contain the grinding machine sets and the control gear for the grinding operation. Each grinding car contains eight grinding units; four arranged on either side, so that in the complete train 24 grinding units are available, 12 for either rail.

The grinding units are designed to meet local operating conditions. The



Rail head after single run over by grinding train

grinding wheels with their leading and trailing guide shoes are lowered on to the rail to carry out the grinding. After completion of the operation, and whilst the train is travelling to and from the sections of track to be ground, the assembly is raised so that the rail itself is free and the train can run at 40-45 m.p.h.

Each grinding unit is usually accessible from the inside of the grinding car through an inspection hatch, and worn-down grinding discs can therefore be changed without stopping the train. This facility enables continuous grinding operations to be carried out for any desired length of time.

#### Truing and Balancing Grinding Wheels

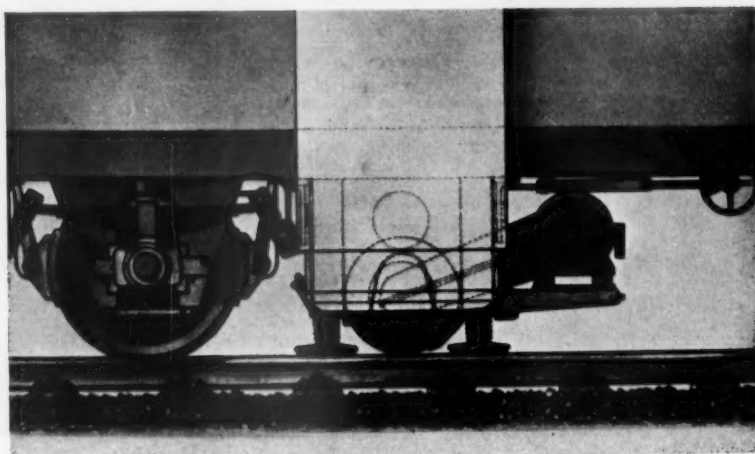
After three grinding cars is a workshop van which contains equipment for truing and balancing grinding wheels and includes storage space for spare grinding wheels. This work, particularly the truing and balancing, must be carried out with great care, as untrue and badly balanced grinding wheels do not run smoothly and give very unsatisfactory results. The spare wheels are gripped by jaws and rounded off by a truing wheel. They are then carefully balanced so that their centre of gravity coincides with the axis of rotation. The grinding wheels so prepared are either packed in shelves for later use or immediately taken to the grinding cars by a hand truck through the gangways between the cars.

The locomotive, the generator van, the three grinding cars and the workshop van are equipped with telephones. Additional vehicles can be included behind the workshop van. A spraying van, for instance, is indispensable in Germany in a dry summer to prevent the outbreak of fires alongside the track after the passing of the grinding units. A tank wagon carrying diesel fuel and finally a vehicle to accommodate the staff are usually attached.

The grinding train has been repeatedly tested and demonstrated on various sections of the German Federal Railway. During these demonstrations it has given every satisfaction, and it has been in full operational service for



*During a run over, showing guide shoes and grinding wheel in contact*



*Grinding gear in relation to wagon wheel and underframe*

some months. It is expected that in a full operational year about 2,500 miles of heavily corrugated rail may be ground. On less heavily corrugated

sections it is quite possible to use only two or even one of the grinding cars or only part of the grinding equipment in individual wagons.

**PASSENGER ARRANGEMENTS AT MANCHESTER CENTRAL.**—Mr. J. W. Tonge, Assistant Public Relations & Publicity Officer, British Railways, London Midland Region, has replied to a letter in *The Manchester Guardian* from a passenger who criticises the paucity of seats in the concourse at Manchester Central Station, and his exclusion from the platform at which, he said, his train, in which he could have sat, was standing; the correspondent added that with proper train indicators and destination boards there would be no danger of getting into the wrong train. Mr. Tonge points out that for some time the question of improving the area of the concourse at Manchester Central has been under consideration with a view to providing more seating. To do so at present would only increase the congestion. The reason why passengers were not permitted on the platform was the possibility

of some getting into a train of empty stock due to leave for the sidings. It is hoped to overcome this by providing blackboards and making loudspeaker announcements, so enabling passengers to be admitted earlier to the platform without risk of entering the wrong train.

**MUREX CONTINUOUS ELECTRODE FOR AUTOMATIC ARC WELDING.**—A new continuous electrode for automatic arc welding has been developed by Murex Welding Processes Limited, Waltham Cross, Herts. Known as Coilex, the electrode is double-wire wound flux extruded and is suitable for use with all types of d.c. automatic welding machines designed for continuous coated electrodes. Coilex has been developed for the welding of mild and medium tensile steels and it can be used for either butt or gravity fillet welds in all classes of steelwork normally con-

sidered suitable for welding. The flux is of the basic type and is therefore suitable for the welding of difficult steels or for making joints in mild steel under conditions of contraction restraint. Among the many special features of the Coilex electrode are a high rate of deposition and deep penetration, consistent burn off, good weld appearance, and easy striking. Good radiographic results, it is claimed, can also be obtained.

**LANDSLIDE BLOCKS MAIN NATAL LINE.**—The biggest landslide in Natal for 20 years blocked the main Natal line 35 miles north of Durban on October 20. It was estimated that to clear the hundreds of tons of rock which covered both the up and down tracks might take two days. The landslide was discovered after a power breakdown, when a pylon carrying overhead cables for electric plants was swept away.

## RAILWAY NEWS SECTION

## PERSONAL

Mr. W. T. P. Perkins, Chief Engineer, Nigerian Railway, has been appointed General Manager of the Sierra Leone Government Railway.

Mr. C. Clarence Horton, Assistant General Manager, Uruguayan State Railways, retired on September 30 last after fifty years of railway service.

to February 18, 1941, Mr. Venner served in the Gold Coast European Volunteer Defence Force. He was Inspector of Machinery, Sierra Leone, from July 1, 1943, to January 1, 1949, and a Member of the Legislative Council, Sierra Leone, from 1947 to 1951. He was also Government Representative on the Sierra Leone Joint Industrial Council for Artisans & Allied Occupations, and on the Sierra Leone Joint Industrial Council for Transport Industry. Mr.

1929, he was appointed Office Superintendent, Mechanical Department, Nigerian Railway, in which capacity he was Personal Assistant to the Chief Mechanical Engineer. On December 29, 1932, he became Assistant Locomotive Superintendent, Sierra Leone Railway. During the war he served in the Royal West African Frontier Force for two short periods during the early months, and later acted as Chief Storekeeper and Railway Air Raid Precautions Officer in



*Mr. W. Venner*  
General Manager, Sierra Leone Railway,  
1947-54



*Mr. J. R. Best*  
Chief Mechanical Engineer, Sierra Leone Railway,  
1951-54

Mr. William Venner, C.M.G., General Manager, Sierra Leone Railway, who is on leave preparatory to retirement on January 24, 1955, was born on April 30, 1903, and educated at Portwood School for Boys, Southampton, King Edward VI Grammar School, Southampton, and University College, Southampton. He began an apprenticeship with the Southern Railway in its Locomotive Workshops at Eastleigh in 1920, and, in 1925, he transferred to the Running Shed at Bournemouth. On November 24, 1926, he was appointed Assistant Locomotive Superintendent, Gold Coast Railways, and in January, 1932, he was promoted to be District Locomotive Superintendent of that system. Appointment as Locomotive Superintendent followed in 1937. He became Chief Mechanical Engineer of the Sierra Leone Railway on February 19, 1941, and was appointed General Manager of that system on October 23, 1947. When the new Deep Water Quay was constructed at Freetown, his position was redesignated General Manager & Port Authority as from January 1, 1954. From July 1, 1940,

Venner is a Member of the Institute of Mechanical Engineers, a Chartered Mechanical Engineer, a Member of the Institute of Locomotive Engineers, and a Member of the Institute of Transport. He was awarded the C.M.G. in the New Year Honours List, 1954.

Mr. James Ralph Best, M.I.Loco.E., Chief Mechanical Engineer, Sierra Leone Government Railway, who, as recorded in our October 22 issue, is retiring, was born at Scarborough, Yorkshire, on March 15, 1905. Mr. Best, who is the son of Mr. J. Dixon Best, formerly Works Manager of the Nigerian Railway, was educated at the Central School, Scarborough, Scarborough High School, the Municipal Secondary School, Openshaw Technical School, and the Manchester College of Technology. He was a privilege apprentice with Craven Bros. (Manchester) Limited from 1922 to 1924, and, from 1925 to 1928, with Beyer Peacock & Co. Ltd. He was a pupil with the London & North Eastern Railway at York Running Sheds from 1928 to 1929, and, on October 9,

addition to his substantive duty as Assistant Locomotive Superintendent. From 1944 to 1951 Mr. Best acted as Chief Mechanical Engineer on six occasions, and, in 1945, as Controller of Road Transport and competent authority. In 1947 he was engaged on special duty in connection with the new workshop extensions, vehicle building and standardisation. In 1948 he acted as Traffic Manager, and, in 1949, he was appointed Locomotive Superintendent. During this period, to mark the Jubilee celebrations, he wrote the history of the Sierra Leone Railway. In 1951, Mr. Best was appointed Chief Mechanical Engineer. He attended the Colonial Railway Standardisation Conferences in 1950 and 1952.

Lt.-Colonel J. F. Todhunter has relinquished his appointments as Director & General Manager of Murex Welding Processes Limited on medical advice. Mr. J. M. Willey, Deputy General Manager of the company since October, 1951, has now been appointed to succeed Colonel Todhunter as General Manager.





**Mr. F. A. A. Menzler**  
Chief Development & Research Officer,  
L.T.E., 1945-54



**Mr. G. H. Taylor**  
Confirmed as Assistant Carriage & Wagon  
Engineer, E. & N.E. Regions



**Mr. H. Kinsey**  
Appointed Assistant to Commercial  
Superintendent (Terminals) E. Region

Mr. F. A. A. Menzler, C.B.E., F.I.A., Chief Development & Research Officer, London Transport Executive, who, as recorded in our October 15 issue, is to retire on November 6, is 66. He was originally in the Civil Service, latterly in the Government Actuary's Department. Mr. Menzler resigned in 1929 to take an appointment in the personal office of Lord Ashfield, then Chairman of the Underground group of companies. In 1930 he was appointed Actuary to the group and later to the London Passenger Transport Board, a position he held until he was made Chief Financial Officer of the Board in 1939. He became London Transport's first Chief Development & Research Officer when the position was created in 1945. In the same year he was appointed Chairman of the Special Advisory Committee to the Standing Joint Committee of the main line railways and the London Passenger Transport Board, which was set up under the London Passenger Transport Act, 1933. After nationalisation the duties of that Committee passed to the London Joint Advisory Committee, of which he also became Chairman. He was a member and acted as Chairman of the London Plan Working Party which reported, in 1949, on the long-term plan of railway development in the London Transport area. As Chief Development & Research Officer he was responsible *inter alia* for the review of general social and economic trends and for research on their reactions on the passenger transport system of London. In these fields he had previously worked closely with Mr. Frank Pick. The first London Travel Survey was undertaken under his direction in 1949. He was also responsible for the general oversight of the Executive's scientific services. In this connection he was closely associated with the development of operational research methods as an aid to efficiency in London Transport. He was appointed in 1948 as the Chairman of London Transport's Research & Development Committee. Other activities have included membership, as a representative of London Transport, of various bodies, including the London & Home Counties Traffic Advisory Committee, and the Committee appointed to report to the British Transport Commission on the technical and economic aspects of railway electrifica-

tion. He submitted papers to the Royal Statistical Society on "London and Its Passenger Transport System" (for which he was awarded the Society's Guy Medal in silver) and to the Institute of Transport on "Statistics and Operational Research in Transport." Mr. Menzler, who is a Bachelor of Science (London), a Fellow of the Institute of Actuaries, a Fellow of the Royal Statistical Society and a Member of the Institute of Transport, in 1950 was elected President of the Institute of Actuaries, the first time that this office had been held by one who was serving outside the conventional fields of actuarial work.

Mr. G. H. Taylor, Acting Assistant Carriage & Wagon Engineer, Eastern & North Eastern Regions, Doncaster, British Railways, since January 1, 1954, who, as recorded in our October 22 issue, has been confirmed in that position, was educated at Doncaster Technical College. He began his railway career in 1908 as an Apprentice in the Doncaster Carriage Shops of the Great Northern Railway, and was subsequently appointed as a draughtsman. After a period in H.M. Forces during the 1914-18 war, he returned to the Drawing Office at Doncaster in 1919 eventually becoming Assistant Chief Draughtsman in the Central Drawing Office. In 1941, Mr. Taylor was appointed Assistant to the Carriage & Wagon Works Manager, L.N.E.R., Doncaster, which position he occupied until 1944, when he was appointed Assistant Carriage & Wagon Works Manager. He became Carriage & Wagon Works Manager, Doncaster, in 1948 and held this position until his acting appointment as Assistant Carriage & Wagon Engineer, Eastern & North Eastern Regions, in January of this year.

Mr. A. J. Chouffot, D.S.M., Divisional Superintendent, North-West Division, Central Road Services, London Transport Executive, has retired. Mr. Chouffot was also Deputy General Superintendent of Central Road Services.

Mr. H. Kinsey, Goods Agent, Kings Cross, Eastern Region, British Railways, who, as recorded in our October 22 issue, has been appointed Assistant to Commercial Superintendent (Terminals) Liverpool

Street, Eastern Region, entered the service of the former London & North Eastern Railway at Filey, in 1926. He was appointed a Traffic Apprentice in 1933 and, on completion of the usual period of training, became a Relief Stationmaster in the Lincoln District. He was appointed to a position in the District Goods Manager's Office, Manchester, in April, 1937, and was Acting Assistant Yardmaster, Manchester (Deansgate), from February, 1940, until March, 1942, when he moved to Grimsby Docks as Acting Dock Agent. Mr. Kinsey remained in this post until February, 1943, when he was appointed Goods Agent, Guide Bridge. In September, 1944, he took up the position of Goods Agent, Ardwick, and, in November, 1948, became Acting Assistant District Goods Manager, Manchester (Eastern Region), which position he occupied until he was appointed Senior Terminals Clerk, Commercial Superintendent's Office, Eastern Region, Liverpool Street, in June, 1951. Mr. Kinsey was appointed Goods Agent, Kings Cross, in September, 1953.

The Pullman Car Company gave a cocktail party at its Victoria headquarters on Thursday last to Mr. S. W. Smart, Superintendent of Operation, Southern Region, British Railways, to wish him well in his retirement. Mr. Stanley J. Adams, Chairman, Mr. F. D. M. Harding, General Manager, Mr. E. J. Morris, Secretary, Mr. N. Johnson, Chief Engineer, and a large number of mutual friends of the company and of Mr. Smart were present.

On October 15, Mr. I. R. Frazer, Civil Engineer, Scottish Region, British Railways, whose retirement was recorded in our August 27 issue, and whose illustrated biography appeared in our September 10 issue, was presented by past and present Scottish Region Officers with a painting by Charles Oppenheimer.

Among those present were:— Messrs. C. H. Brazier, Regional Staff Officer; W. Bryson, Signal & Telecommunications Engineer; T. F. Cameron, Chief Regional Manager; C. R. Campbell, Motive Power Superintendent; E. C. Dewick, Estate & Rating Surveyor (Retired); J. G. Dunlop, Accountant; J. Hastie, Treasurer; M. S. Hatchell, Mechanical & Electrical

Engineer; T. H. Hollingsworth, Commercial Superintendent; H. M. Hunter, Public Relations & Publicity Officer; L. E. Marr, Manager, Clyde Shipping Services; J. McCreadie, Operating Superintendent; R. M. Scott, Assistant Estate & Rating Surveyor; A. Stewart, Assistant to Chief Regional Manager; W. L. Turner, Road Motor Engineer; M. Wallace, Solicitor (Retired).

L.M.A. DINNER AND PRESENTATION TO  
MR. G. COLLINGWOOD

Members of the Internal Combustion Group of the Locomotive Manufacturers Association gave a dinner on Thursday, October 28, at the Hyde Park Hotel to Mr. G. Collingwood, T.D., Managing Director of Vulcan Foundry Limited, in recognition of his services to the group as Chairman from October, 1950, to January, 1954.

The Chairman of the group, Mr. C. C. H. Wade, English Electric Co. Ltd., presided, and paid tribute to Mr. Collingwood for his considerable contribution as regards the progress of the group during his period of office. Mr. G. W. C. Birdsell, Director, Hudswell, Clarke & Co. Ltd., and Mr. G. H. Sheldon, Managing Director, Walker Bros. (Wigan) Ltd., also expressed appreciation to Mr. Collingwood for his work as Chairman.

Mr. Collingwood, in replying, said that he was very proud to have served the Group as Chairman and to have been so closely associated with the considerable progress and consolidation that had been achieved by the group since its formation in 1947.

After the dinner the Chairman presented Mr. Collingwood with a gold pocket watch on behalf of members, and Mr. John F. Alcock, President of the L.M.A., showed a colour film of his travels in Africa.

A Dublin branch of the British Railways Midland Region Staff Association has been formed. Mr. G. B. Gray, General Agent, British Railways, presided.

The following officers were elected:—*Chairman*, Mr. G. B. Gray; *Honorary Secretary*, Mr. T. Corbett; *Honorary Treasurer*, Mr. R. Macken; *Committee*, Miss N. Johnston, Miss V. O'Reilly, Mr. G. Palmer, Mr. G. J. Balmer and Mr. J. J. Leenane.

Mr. R. W. F. Wilberforce has been appointed a Director of the Butterley Co. Ltd.

Dr. J. Craik has been appointed Chairman of I.C.I. Nobel Division as from April 1 next.

Mr. A. J. Betts, A.M.I.E.E., has been appointed General Sales Manager, Enfield Cables Limited.

Dr. R. Beeching has been appointed Chairman of I.C.I. Metals Division as from February 1 next in succession to Mr. C. E. Prosser.

General Sir G. Ivor Thomas, G.C.B., K.B.E., D.S.O., M.C., has joined the Board of Rubber Improvement Limited.

Mr. I. L. Gray, General Manager of the Yorkshire Woollen District Transport Co. Ltd., has been appointed to succeed Mr. W. M. Dravers as General Manager of the South Wales Transport Ltd., as from December 1, 1954.

Lt.-Colonel Harry Gresham has been appointed Director & London Manager of Gresham & Craven Limited, with effect

from October 30, 1954. Pending the opening of offices at 15, Whitehall, London, S.W.1, all enquiries and letters should be addressed to Gresham & Craven Limited, either at Ordsall Lane, Salford, 5, Manchester (tel.: Deansgate 6061), or 14, Great Peter Street, Westminster, London, S.W.1 (tel.: Abbey 5964).

The retiring officers of the Gauge & Tool Makers' Association were re-elected for the current session, 1954-55, and are:—

Mr. F. W. Halliwell, President; Mr. A. L. Dennison, Chairman; Mr. S. J. Harley, Vice-Chairman; and Mr. L. E. Van Moppes, 3 Vice-Chairman. Mr. R. Kirchner is Hon. Treasurer.

## East African Railways District Officers' Conference

The accompanying illustration shows District Officers assembled from all parts of Kenya, Tanganyika, and Uganda on the occasion of the District Officers' Conference of the Commercial and Operating Departments, East African Railways & Harbours, which was held in Nairobi in September.

Against each name is shown the position which the officer occupies. Details are given in brackets of previous railway experience before coming to East Africa.

*Back Row (from left to right):* Messrs. W. S. MacGregor, 2nd Officer ss. *Usoga*; F. J. L. H. Stone, Officer i/c Tabora Training School; J. J. S. Dunlop, Acting Assistant Traffic Superintendent, Southern Province, Tanganyika (L.M.S.); C. P. Johnson, Acting Assistant Traffic Superintendent, Tabora (L.M.S. and Palestine Railway); P. G. Brice, Acting Assistant Traffic Superintendent, Tanga (G.W.R. & Rhodesia Railways); J. M. Caird, Assistant Traffic Superintendent, Kisumu; E. J. M. Hayward, Acting District Traffic Superintendent, Nakuru (G.W.R.); N. E. Norman, Assistant Traffic Superintendent, Commercial, Nairobi H.Q. (S.R. & Nyasaland Railways); K. H. Marshall, Acting Assistant Traffic Superintendent (Staff) (L.M.S.); A. W. W. Fitzgerald, Acting Personal Assistant to Chief Operating Superintendent, Nairobi H.Q. (G.W.R. & Nyasaland Railways); Cdr. P. W. Barton, Commander ss. *Nyanza*.

*Middle Row (left to right):* Messrs. W. S. Morrison, Acting Senior Administrative Assistant (Staff), Nairobi H.Q.; J. E. Hare, Assistant Traffic Superintendent (Works) (L.N.E.R.); Cdr. D. Boyd,

Commander of ss. *Rusinga*; Messrs. G. Ellis, Senior Administrative Assistant (Rates), Nairobi H.Q. (Great Indian Peninsula Railway); H. M. Gordon, District Traffic Superintendent, Mombasa (Madras & Southern Mahratta Railway); R. B. Morris, District Traffic Superintendent, Kampala (G.W.R.); S. W. S. Macqueen, Assistant Superintendent (Road Services), Nairobi H.Q.; Q. More, Acting Road Transport Superintendent, Dodoma (L.N.E.R.); J. N. Murray, Acting District Traffic Superintendent, Dar-es-Salaam (L.M.S.); Lloyd Jones, Acting District Traffic Superintendent, Tabora (L.M.S. & Sierra Leone Railways); H. Bleazard, Assistant Road Transport Superintendent (Technical), Iringa, R. A. Rapley, Commercial Inspector, Nairobi H.Q.; F. A. Anscombe, Chief Engineer (Marine) ss. *Usoga*.

*Sitting (from left to right):* Messrs. W. Buttery, District Traffic Superintendent (Operating), Nairobi H.Q. (L.N.E.R.); T. C. W. Tiffin, Acting Senior Marine Officer, Nairobi H.Q.; R. H. Whittington, Acting Assistant Chief Operating Superintendent, Nairobi H.Q. (G.W.R.); D. D. Bartlett, Chief Operating Superintendent, Nairobi H.Q. (G.W.R.); J. H. Collier-Wright, Acting Chief Commercial Superintendent, Nairobi H.Q. (L.N.E.R.); C. I. Wotherspoon, Acting Assistant Chief Commercial Superintendent, Nairobi H.Q. (Jodhpore Railway—India); D. V. Bunting, District Traffic Superintendent, Nairobi (G.W.R.); A. J. R. Master, Assistant Superintendent (Hotels & Catering) Nairobi H.Q. (Pullman Car Co. Ltd.).



District Officers of the E.A.R. & H. at the Nairobi conference

## European Timetable & Through Carriage Conference, 1954

*Acceleration of some international expresses:  
improved services between Britain and  
Italy, Germany, Austria, and Yugoslavia*

At the invitation extended by the Hungarian State Railways at the conference at Athens last year, the European Timetable & Through Carriage Conference was held this year in Budapest on October 6-16. Delegates attended of most European railways and of some systems in the Near and Middle East whose services connect with those of the European railways. Meetings were held in the Military Officers' Club, Budapest. The invitation of the German Federal Railway was accepted for next year's conference to be held in Wiesbaden on October 5-15.

The British Railways' delegation consisted of:—

*Southern Region:* Messrs. R. E. Sinfield, Continental Superintendent; W. J. Nigh, Passenger Assistant to Continental Superintendent; S. W. Robins, and R. P. M. Wormal.

*Eastern Region:* Messrs. L. H. K. Neil, Continental Traffic Manager; V. W. T. Wadson, Chief of Passenger Section; and C. H. Archer.

Meetings to discuss the 1955 summer passenger timetables and through carriage arrangements for the principal international expresses operating in Europe were held during the first week, and these covered such trains as the "Simplon-Orient Express," the "Orient Express," and the "Arlberg-Orient Express." Brief information on the decisions reached at the conference regarding the principal trains connecting with steamship services from and to Great Britain is given below. The summer services on the Continent will begin, with a few trains introduced later in the season, on May 22, 1955, and the 1955-56 winter service from October 2 to June 2. Extensions of the winter service to a date after Whitsun, 1956, was agreed by the conference as an exceptional measure.

The "Simplon-Orient Express" is to run daily and to be slightly accelerated and will include ordinary third class accommodation throughout between Paris and Istanbul. The Calais-Trieste sleeping car is to be limited to Venice.

### "Orient Express"

This train will be accelerated as between Paris and Vienna via Strasbourg, Munich, and Salzburg. Besides the ordinary through coach (all classes) between Calais and Vienna via Strasbourg, a first and second sleeping car will run between Calais and Salzburg, connecting, eastbound, with the afternoon service from Victoria.

### "Arlberg-Orient Express"

Agreement was reached on operation of the A.O.E. six times a week (instead of four) in each direction as between Vienna and Hegyeshalom (the Austro-Hungarian frontier station), with a corresponding increase in the number of through vehicles weekly between Paris, Budapest, and Bucharest. Arrangement were also agreed for a new day train to run between Vienna and Budapest to provide a day connection between these cities.

### "Nord Express"

The working was examined in detail with a view to re-routing via Grossebrode-Gedser next summer, instead of via Fredericia-Nyborg-Korsor, but it was eventually decided to maintain the routing via the latter route. From May 22, 1955, the Nord Express will leave Paris Nord at 9 p.m. (instead of 7.45 p.m.). Westbound, arrival in Paris will be at 9.35 a.m. (instead of 10.30 a.m.).

Besides the through vehicles to and from Belgrade and Athens the "Tauern Express" will include a second and third

class coach from Ostend Quay to Sarajevo and vice versa. This Sarajevo coach will provide a good through service to Yugoslavia for visitors to resorts in Dalmatia.

### "Rome Express"

In view of the anticipated completion of the electrification of the Macon-Amberieu section by May, 1955, acceleration between Paris and Rome for next summer was found possible. Passengers by the "Rome Express" service will be able to leave Victoria at 11 a.m. via Dover-Calais and go forward from Paris Lyon at 7.50 p.m. so as to reach Genoa at 8.7 a.m. (instead of 9.33 a.m.), and Rome at 2.35 p.m. (instead of 4.2 p.m.). Northbound departures will be: Rome 1.40 p.m. (instead of 12.30 p.m.) and Genoa 8.11 p.m. (instead of 7.3 p.m.). The first and second class ordinary train from Calais to Rome in connection with the 11 a.m. service from Victoria will be replaced by a second class through carriage with reclining seats.

### "Sud Express"

The journey between Paris and Madrid and Lisbon by the "Sud Express" will be cut by about 1½ hr. each way. The southbound train will leave Paris Austerlitz at 1.35 p.m. (instead of 11.50 a.m.), and the northbound train will arrive in Paris at 5 p.m. (instead of 6.40 p.m.).

### New Service to Yugoslavia

After representations made by the Yugoslav State Railways for better connections between England, Belgium, Germany, Holland, and Yugoslavia, arrangements were agreed for a new through train from Ostend to Yugoslavia in connection with the night service from Victoria via Dover-Ostend. This new train, which will be known as the "Jugoslavian Express," will have through carriages to Belgrade and Rijeka, and will leave Ostend Quay every morning from July 9 to August 22. Westbound it will connect with the night steamer from Ostend during the high season. This new service will offer connection at Rijeka with the Jadranska steamer service along the Dalmatian coast.

### Anglo-French Services

The 1955 summer timetables will be basically similar to last summer's. The Folkestone-Boulogne service will begin a week earlier, from June 10. There will be the usual night service via Newhaven-Dieppe and the Southampton-St. Malo direct sailings.

### Services via Dover-Ostend

There will be improved services to and from South Germany, Austria, and Yugoslavia, including the "Tirol Express" and the "Steiermark Express."

### Germany via The Hook

A relief train will run daily between the Hook of Holland and Hamburg daily from June 30 to September 3, which will convey the Hook-Bad Harzburg coach normally running in the "Holland-Scandinavia Express." The "Loreley Express" will be accelerated southbound.

There will be an improvement in the service to the Ruhr by extending to The Hook vehicles at present included in a train between Rotterdam, Cologne, and Dortmund via Emmerich and Oberhausen.

### "Holland-Italy Express"

This train will include a new through coach between The Hook and Konstanz via Offenburg, serving the Black Forest.



Mr. George Csanádi, General Manager of the Hungarian State Railways, welcoming Mr. L. H. K. Neil and Mr. R. E. Sinfield at a reception to delegates in the Parliament House, Budapest



## Parliamentary Notes

## Commons Debate on Railway Reorganisation Scheme

*Composition of boards: spending powers: possible extension of functions*

Mr. Hugh Molson (Joint Parliamentary Secretary to the Ministry of Transport & Civil Aviation) on November 1 moved in the House of Commons "That this House takes note of the White Paper on the Railways Reorganisation Scheme presented to Parliament by the Minister of Transport & Civil Aviation."

He said that the Government in bringing forward this scheme was trying to give effect to what the Prime Minister announced as Government policy on November 3 last year. When nationalisation came into effect, the control of the railways was vested in the Railway Executive, an almost entirely functional body. That might have been considered best to effect the complete unification of four different railway systems and obtain the advantages of economies for an administration which began by being highly centralised and in the hands of technicians. Soon the Railway Executive felt that the organisation it was administering would be too centralised to be a permanent and satisfactory system. Before 1951 the Railway Executive appointed regional officers responsible for the administration of all departments in the six regions set up. The British Transport Commission came to much the same conclusion. Early in 1951, and before the change of Government, the Commission concluded that further substantial devolution was necessary. On October 1, 1953, it had introduced an interim organisation in which the Chief Regional Officers became Chief Regional Managers, and to a large extent the regions were left free to administer their own concerns.

## Membership of Area Boards

The scheme was a logical and natural development from the interim scheme. The 1953 Act required the B.T.C. to decentralise more, and it had decided in favour of boards. There would be six boards responsible for the administration of the existing six regions, which would be renamed areas. Members of the boards would be found from men in contact with commerce, industry and labour, and representatives of the travelling public. The number of members might vary from two to six in addition to the chairman. One of the members would be a member of the B.T.C., but he would not necessarily be chairman. The Government believed that would be a most valuable liaison between the central authority and the boards.

What was required of the area boards, in the view of the Government, was not detailed technical knowledge of transport. It wanted public spirited and responsible men who would have the confidence of both those who used and those who worked on the railways. The only way the B.T.C. would be able to obtain the services of responsible public men would be by giving them full scope for important and responsible work.

Mr. Molson said that decentralisation could not be carried out to the point where it would mean the destruction of the unification already achieved. The B.T.C. would appoint a Chief Regional Manager responsible for day-to-day administration in each area. Policy, as it applied to the railway system as a whole,

would continue to be decided by the B.T.C. There would be a two-way movement of ideas between the Commission and the boards.

## Expenditure by Boards

Each board would be required each year to prepare a budget of revenue and capital expenditure for approval by the Commission. When the budgets had been approved the carrying out of the work would be left to the boards. The total expenditure on the railway system was likely to be about £446,000,000, of which about £445,000,000 would be spent by the boards. Only a little more than £1,000,000 would be spent by the Commission. The boards would be concerned for the present only with railways, though other duties might be assigned to them later. The Commission was looking to further devolution in the future, as time and experience suggested might be desirable.

## Divided Authority Criticised

Mr. James Callaghan (Cardiff S.E.—Lab.) said the scheme of divided authority between the Commission and the area boards was sinning against the cardinal principle of organisation and administration that there should be a clear line of command. There would be discussions and arguments about where responsibility lay because the Minister had sacrificed good administration to party dogma and prejudice.

He asked whether the area boards were really going to spend £445,000,000 and how often they were going to meet. If the Minister cared to say that the area board was no more than a façade and a sham, in which the regional manager would really do the job, he could understand. If he meant to say that part-time gentlemen, drawing a small remuneration, were to be responsible for spending £445,000,000, it was a disgrace and ought not to be permitted. The Opposition certainly would not agree to such a scheme. The Minister had not produced a scheme which would add one man or wagon or locomotive to the railways.

Mr. John Maclay (Renfrewshire—Nat. Lib. Con.) said the scheme went a fair distance towards meeting what many members felt to be necessary in railway reorganisation. It was a welcome admission by the Minister that he and his colleagues believed in executive devolution, which the Commission had made clear was yielding good results. The interim organisation had produced substantial improvements. Some of the results in Scotland had been very good.

## Threat to Unification

Mr. Ernest Davies (Enfield E.—Lab.) said that the scheme would make no contribution to the needs of transport, nor would it contribute to a more efficient and economical transport system in Britain. If it was approved unification of the railways would be threatened. Regional Managers were bound to have a dual responsibility, to the area boards and to the Commission.

Mr. Geoffrey Wilson (Truro—C.) said that he welcomed the scheme with some apprehension. It seemed that all the old shibboleths and phrases, which the

Socialists elevated into idols, for which they were prepared to permit human sacrifices, lay heavily across the White Paper.

## Expert Management

Mr. Steele (Dunbarton, W.—Lab.) said that instead of unnecessary and expensive boards there should be expert decentralised management with a proper recognition of those who were already working it.

Sir David Robertson (Caithness & Sutherland—C.) asked if the area boards were to be directors, like those of the old companies, or just be busy people from other walks of life coming to listen to what the Regional Manager told them, without powers of criticism or control. If so, he could not support the proposal.

Mr. Leslie Thomas (Canterbury—C.) said that if the area boards were brought into operation they would merely have the power of decision now undertaken by the regional general managers. The railway industry had been the subject of party battles for too long. He was afraid the proposed scheme would simply cause an impediment and hindrance at the highest level of regional management.

Mr. Norman Cole (Bedfordshire S.—Lib. & Con.) said that one of the duties of the area boards would be to encourage the natural *esprit de corps* of the Regions.

Mr. Rees-Davies (Isle of Thanet—C.) said that Parliamentary and Ministerial control would suffer by the scheme. There should be a three-way movement of ideas, with accountability to the House and the select committee, so that there would be effective Parliamentary control whatever Government were in power.

## Disadvantages of Scheme

Mr. David Jones (The Hartlepool—Lab.) said that the Minister would no doubt be conversant with what the Press had to say about the scheme. *The Railway Gazette* of July 16 had said:—

"The White Paper gives little detail of these boards, but their creation would not seem to be either necessary or desirable. A great deal has been said about the need for, and the intention of, granting much greater autonomy and responsibility to the Chief Regional Managers. This we consider to be fundamentally sound, but, in our view the effect of creating boards is not in the least likely to assist this process. Either the boards will tend to become managerial in their functions, which will be bound to reflect adversely on the position of the Chief Regional Managers, or they will intervene between the Chief Regional Managers and the Commission, which will whittle down his direct access to that body, and thus reduce his authority, or they will be negligible parties of non-entities who will serve no useful purpose and thus had better never to have been created."

The following week it said: "Further study of the proposals for reorganisation of the railways put forward in the White Paper, on which we commented last week, does little to dispel misgivings as to the suggested interposition of the Regional boards between the B.T.C. and the Chief Regional Managers. . . . Apart from the fact of the Regional boards, the very existence of which must prejudice the autonomy and responsibility of Chief

Regional Managers, the Commission has emphasised that day-to-day management is to be left to the Chief Regional Manager and that the reorganisation of railways should be developed from the principles of the interim organisation. . . .

He could give comments by many other newspapers, but he thought he would content himself with expounding the views of the technical Press.

The railway unions were concerned about the proposals in the White Paper, and they had voiced opposition to the scheme. Unless the scheme was altered and the area boards eradicated, Opposition members reserved the right, when it again came before the House, to vote against it.

Mr. John Boyd-Carpenter (Minister of Transport) said that in the new organisation the chain of command would run from the Commission to the board and from the board to the chief regional manager. This would not prevent the ordinary staff consultations which in any great organisation took place between the staff officers of the supreme and those of the subordinate body. It would be of great value to the general managers for them to work in close contact with boards which had a wide general experience and understood the needs and the feelings of the people in the areas. The application of the new charges in a particular area might be a matter appropriate for the area board to consider and, within local limitations, decide on.

Criticism had been made about the proposed composition of the area boards, but when one considered the functions that they were to perform it did seem better to have people appointed for their personal qualities and abilities, rather than because they represented particular interests. Members so appointed would feel somewhat freer to use their knowledge than if they represented a particular interest.

#### Assistance of Trades Unions

It was clear, though, that the trades unions occupied such a position in the life of the country that no body performing functions such as those of the area boards would be sufficiently broadly constituted if the trades union were omitted from the field of selection. The Commission was right to stand out against representative boards, but he had been told that it was counting on the services of experienced trades unionists to assist on the area boards.

#### Plan for Re-equipment

He had been informed by the Chairman of the Commission that he hoped to present a plan for the re-equipment and modernisation of the railways before the end of the year. It would be of a drastic and exhaustive nature, based on a re-assessment of the future role of the railways. Much careful technical preparatory work had been necessary, and the plan was now before the Commission.

It was right that the appointment of the members of the area boards should be in the hands of the Commission and not of the Minister.

The motion was agreed to.

### Questions in Parliament

#### Port Charges and Railway Rates

Mr. James Callaghan (Cardiff S.E.—Lab.) on October 27, asked the Minister of Transport & Civil Aviation to what extent the trade of the port of Cardiff had been adversely affected by the present port

charges and railway rates; and if he would consult with the B.T.C. with a view to removing these handicaps.

Mr. John Boyd-Carpenter replied that questions of such charges were for the B.T.C.

Mr. Callaghan said Cardiff docks were working a smaller number of turns a week than the national average, and unemployment was resulting there. As the Minister was partly responsible for port charges, if not for railway charges, he asked if he would at least look into that aspect.

Mr. Boyd-Carpenter said it was hard to say what proportion of the difficulty was caused by those charges. The Commission was looking into the matter.

#### Proposed Railway Extension in Swaziland

Mr. Leslie Hale (Oldham West—Lab.) on October 21 inquired whether the Under-Secretary of State for Commonwealth Relations, was now in a position to announce the result of the discussions with reference to the proposed railway extension in Swaziland.

Mr. A. D. Dods-Parker (Parliamentary Under-Secretary of State for Commonwealth Relations) replied: I have nothing to add to the answer given to a Question by the Rev. R. W. Sorensen (Leyton—Lab.) on June 3, in which it was stated that the possibility of constructing a railway from Lothair into the Usutu Forest area

of Swaziland has for some time been under examination in consultation with the Government of the Union of South Africa. Any extension beyond that, is not at present contemplated. There are big schemes for railway and other transport development in Africa south of the equator. This is a particular case in which there are factors not yet known and it is not possible to make a decision yet.

#### Burma-Siam Railway

Colonel J. H. Harrison (Eye—C.) on October 25 asked if the Minister of Pensions & National Insurance would make a further statement about the distribution of Japanese assets in the United Kingdom and of the United Kingdom share from the sale of the Burma-Siam Railway.

Mr. Osbert Peake replied: We have received substantially more than we expected from the realisation of Japanese assets in this country under the Peace Treaty. This enables us to increase the final payment forecast in July from £20 to £28 a head. Taking into account the first distribution of £15, all those qualified to take part in the distribution of this money will therefore receive a total sum of £43. Servicemen will also get a further sum out of the money received from the Burma-Siam Railway, which will bring their total payment up to £46.

## Gloucester Railway Carriage & Wagon Co. Ltd.

*Record turnover; challenge of increasingly competitive prices*

The annual general meeting of the Gloucester Railway Carriage & Wagon Co. Ltd. was held in London on October 29. Sir Leslie Boyce, Chairman & Managing Director, who presided, pointed out in his statement circulated with the report and accounts for the year ended May 31, 1954, that the company's output in that year exceeded £4,250,000. The output was mainly for overseas and constituted a further record in the long history of the company.

The delivery of the 100 steel cars required for the opening of the Toronto Subway was completed on time. This achievement, Sir Leslie Boyce said, had not only done much to enhance the prestige of British industry in Canada and elsewhere, but also reflected credit on the company and on all those associated with the contract. Their relations throughout with the Toronto Transit Commission could not have been more satisfactory, and they had received an order recently from the Commission to build a further two light-alloy cars to follow those of similar type which they now had under construction.

#### Rolling Stock for Overseas

Since the last annual meeting, in addition to the foregoing, they had either built or were building carriages, railcars, or wagons for the railways of Britain, the Commonwealth of Australia, Victoria, Western Australia, Malaya, India, Ceylon, Sudan, Kenya, Tanganyika, and the Gold Coast.

It remained the policy of the directors to develop and expand the three subsidiary companies in order to broaden activities and to ensure, so far as possible, a stable and satisfactory income for the parent

company irrespective of any future fluctuations in the rolling-stock industry. These companies were the Gloucester Foundry Limited, William Gardner & Sons (Gloucester) Ltd., and Hatherley Works Limited. Although a temporary trade recession at the foundry coincided with the mechanisation of the malleable department there was a pronounced increase in the number and size of the inquiries and contracts which were received, and their policy of complete mechanisation would enable them to meet the demands which were being made.

Both William Gardners and the Hatherley Works, with its new and enlarged production mill now built and equipped with the latest types of machinery, had had another successful year. As to the future, Sir Leslie Boyce continued, the parent company had a large number of contracts that would keep it very busy. He must, however, emphasise the fact that prices were becoming increasingly competitive. To meet this challenge they were constantly exploring methods of achieving higher productivity throughout the works with a view to maintaining and, if possible, to increasing, at a reasonable profit, their share of the world's markets. The activities of their subsidiaries, from which the benefit of the various development schemes had yet to be felt, should prove to be an increasingly valuable adjunct.

The buildings, plant, and machinery throughout the group had been maintained in an efficient manner.

The report and accounts were unanimously adopted and the dividend, as recommended, was approved. Details of the financial results were given in our issue of October 15.

## Contracts & Tenders

**Arn. Jung Lokomotivfabrik G.m.b.H.,** Jungenthal, near Kirchen/Sieg, Western Germany, has received from the Egyptian Republic Railways an order for 27 diesel-hydraulic locomotives. They are of a type of which the firm has supplied 15 units already to the Egyptian Republic Railways, in 1953, and which in the meantime has been undergoing tests in Egypt.

Principal particulars are as follows:—

Gauge ..	4 ft. 8½ in.
H.p. ..	360
Wheel arrangement ..	0-6-0
Weight in service ..	45 tons
Engine fitted ..	MWM (Motorenwerke Mannheim) make, type RHS 335 S
Transmission ..	Voith, Heidenheim make, type L 37

The order is stated to have been booked after prolonged negotiations and in the face of competition from other countries.

The Central Wagon Co. Ltd. has received an order for 100 16-ton hopper-type wagons, with four well-type bottom doors, from the National Coal Board, Opencast Executive. They will be used in the North Eastern Area.

British Railways, Scottish Region, have placed the following contracts:—

Standard Telephones & Cables Limited, Glasgow: supply of train describers in connection with modernisation of signalling installation at Cowlares

Wm. Baird & Son Ltd., Glasgow: new machine shop buildings at Eastfield Motive Power Depot, Glasgow

Murdoch MacKenzie Limited, Motherwell: reconstruction and widening of Bridge No. 88 between Ayr and Maybole

British Railways, London Midland Region, have placed the following contracts:—

Henry Hope & Sons Ltd., Birmingham: renewal of roof coverings with patent-glazing at Irlams o' th' Height carriage shed

The Butterley Co. Ltd., Butterley: reconstruction of the superstructure of Bridge No. 120, Manchester and Liverpool line, Green Lane, Patricroft

Edward Ward & Sons Ltd., Derby: work at Walsall Motive Power Depot

W. G. Kaleyards Limited, Chester: renewal of roof coverings with patent glazing (Stage 1) at Chester General Station

Weston & Co. (Manchester) Ltd., Manchester, 3: renewal of roof coverings with protected metal roof sheeting (Stage 1) at Chester General Station

British Railways, Eastern Region, have placed the undermentioned contracts:—

Siemens & General Electric Railway Signal Co. Ltd., Wembley: supply and installation of equipment for alterations to signalling in connection with Shenfield-Chelmsford Electrification

Charles R. Price, Doncaster: strengthening of portion of underline bridge No. 81, carrying up and down main lines over River Rother between Clay Cross and Chesterfield Midland

Samuel Butler & Co. Ltd., Stanningley: renewal of floor joists and repairs to steelwork at Bridge No. 1 (girders supporting back wall of Great Eastern Hotel over Nos. 9 and 10 platforms), Liverpool Street Station

Holmpress Piles Limited, Hull: construction of foundation piles for new wagon repair shop at Temple Mills Marshalling Yard

M. J. Gleeson (Contractors) Limited, North Cheam: extension to platforms and awnings, construction of new ash pit and buffer stops at Fenchurch Street Station

Alterations to and renewal of decking and alteration to signal gantry at Royal Mint Street Goods Depot

George Longden & Son Ltd., Sheffield, 1: reconstruction of platforms at Gainsborough Lea Road Station

British Railways, North Eastern Region, have placed the following contracts:—

Consolidated Pneumatic Tool Co. Ltd., London, S.W.6: Two 10 k.w. frequency changers and tools

Henry Pels & Co. Ltd., 32-38, Osnaburgh Street, London, N.W.1: one punching and cropping machine

Joseph Rhodes & Sons Ltd., Wakefield: one pair guillotine shears

F. & J. Watkinson, Bradford: provision of new weigh office and foundations for new 20 ft. x 8 ft. 20-ton cart weighbridge at Grassington

The High Commissioner for India invites tenders for broad-gauge axles. See Official Notices on page 532.

According to the Special Register Information Service, Export Services Branch, Board of Trade, the recent call for tenders issued by the State Railways of Thailand for all-steel bogie coaches (metre gauge) relates to 36 vehicles, with the possibility of a further 170. Details of the original tender were given in our October 29 issue.

The Special Register Information Service, Export Services Branch, Board of Trade, reports a call for tenders for 105 electric motor coaches and 295 plain trailer coaches for the Reef electrified lines of the South African Railways. Tenders, in sealed envelopes, clearly endorsed Tender No. B.8455 in the left hand corner, should be addressed to the Chief Stores Superintendent, Room 208, Park Chambers, Rissik Street, Johannesburg. The closing date is January 13, 1955. A copy of the tender documents may be inspected at the office of the High Commissioner, South Africa House, Trafalgar Square, London, W.C.2.

The Special Register Information Service, Export Services Branch, Board of Trade, reports a call for tenders for 3,000-V. overhead equipment for India. The requirements are the supply, erection and maintenance for a period of one year after completion of the complete overhead equipment excluding steel structures on the Howrah-Burdwan main line via Bandel and Sheoraphuli-Tarakaswar branch, including all running lines, crossover roads, loops, sidings and portions of goods sidings. The approximate total mileage of running lines, crossover roads, goods sidings, etc., is 260.

The issuing authority is the General Manager, Eastern Railway, Calcutta. Tenders should reach the Engineer-in-Chief, Calcutta Electrification Project, Eastern Railway, Calcutta, by January 2, 1955. A copy of the tender documents, including specifications, is available for loan to United Kingdom firms on application to the Branch (Lacon House, Theobalds Road, W.C.1). Tender documents may be purchased for Rs. 30/- from the General Manager, Eastern Railway, Calcutta.

According to the Special Register Information Service, Export Services

Branch, Board of Trade, a call for tenders for diesel locomotives for Spain has been issued by the Foreign Operations Administration (F.O.A.). The requirements are two locomotives for track gauge of 1 m. The characteristics are:—

Motor (diesel) rated h.p. of 40

Starting: electrical or manual operated

Clutch: of specially robust construction and made for minimum wear

Reversing gear: for four speeds in both directions. The gear is to be completely sealed against valvoline losses and entry of dust. Range of speeds between 0-15 Km./h.

Transmission: preferably by a strong bevel pinion gear instead of chains or connecting rods

Chassis: of steel plate especially robust, welded

Service weight: about five tons

The purchase authorisation number is P.A. 52-850-00-4283-1. The issuing authority and address to which bids should be sent is Cementos Rezola S.A., Churruca 7, San Sebastian. The closing date is November 12.

A copy of the tender documents, including specifications and conditions of tender, is available for loan to United Kingdom firms in order of receipt of application to the Branch (Lacon House, Theobalds Road, W.C.1.).

The Director General of Supplies & Disposals, New Delhi, invites tenders for:—

(a) 1176 } brake blocks for flanged tyres  
228 } (locomotives) (two lots)

(b) 29,000 }  
31,000 } brake blocks (b.g.)

(c) pieces for 135 coaches:

7560 parting plates, broad gauge

7560 buffing springs, broad gauge

1620 parting plates, broad gauge

1620 recoil springs, broad gauge

540 recoil spring washers, broad gauge

540 buffer casings, broad gauge

540 buffer plunger plugs, broad gauge

540 buffer plungers, 18in.

540 buffer spindles, broad gauge

540 cotters, split

540 1½-in. B.S.W. nuts

Tenders are to be submitted to the Director General of Industries & Supplies, Shahjahan Road, New Delhi, quoting references: (a) SRI/16870—E/II, (b) SRI/17545—E/II, (c) SRI/16904—E/III. They will be received up to 10 a.m. on (a) November 12, (b) November 15, (c) November 16.

Forms of tender are only available for purchase in India from the Deputy Director General (Supplies), Directorate General of Supplies & Disposals, New Delhi; Director of Supplies & Disposals, Bombay or Calcutta; Deputy Director of Supplies & Disposals, Madras.

If the date for the receipt of tenders does not allow sufficient time for tenderers to obtain tender forms from India, they may submit their quotation to India in their own letter form or by telegram so long as all essential particulars are given and provided they simultaneously apply for tender forms and return them duly completed as quickly as possible on the basis of quotations submitted.

A copy of the tender form can be examined at the India Store Department, 32-44, Edgware Road, London, W.2, on application to the "CDN" Branch. The drawings can be seen at the offices of Hodges Bennett & Company, 59-60, Petty France, London, S.W.1, from whom copies may be obtained.



## Notes and News

### Temporary Technical Assistant Required.

—London Transport requires a temporary technical assistant for the office of the Assistant Civil Engineer (Permanent Way). See Official Notices on page 532.

**Vacancy for Engineer.**—Applications are invited for the post of engineer, between 35 and 45 years of age, required for railway location in the northern part of South America. See Official Notices on page 532.

### Snow Galleries on the Bernina Railway.

It is regretted that Mr. H. Conrad is wrongly described in the article in our October 22 issue as Chief Engineer of the Rhaetian Railway "since 1952; these words should have read "until 1952."

### Train Services to be withdrawn from Alva and Menstrie Stations.

—The passenger train service was withdrawn from Alva and Menstrie Stations, Scottish Region, on November 1. The decision to discontinue the service had been approved by the Scottish Transport Users' Consultative Committee. Frequent bus services operate in the Alva and Menstrie areas, and rail passengers travel to or from Alloa or Stirling. Parcels and other merchandise traffic by passenger train and freight train traffic continue to be dealt with at Alva and Menstrie.

**Presentation to Mr. H. C. Walton.**—On the occasion of the first meeting of the Board of Management of the Railway Benevolent Institution, held on October 20 in the new offices at 30, Tavistock Square, London, W.C.1, as recorded in last week's issue, a presentation was made to Mr. H. C. Walton, who had retired on June 30 after 27 years as General Secretary of the Institution. In the absence of Mr. C. P. Hopkins, Chief Regional Manager, Southern Region, and Chairman of the board of the Institution for the current year, the presentation was made by Mr. J. W. Watkins, Chief Regional Manager, London Midland Region, who is a member of the board and Chairman-elect of the Railway Benevolent Institution for 1955. The accompanying illustration shows (from left to right): Mr. E. D. Grassett, Major-General G. S. Szlumper, Mr. T. W. Royle, Mrs. H. C. Walton, Mr. G. Morton, Mr. H. C. Walton, Mr. F. G.

Maswell, Mr. R. A. Riddles, Mr. J. W. Watkins, Mr. J. I. Campbell, Sir William V. Wood, Mr. T. J. Lynch, Mr. E. N. d'E. Darby, Lt.-Colonel H. Rudgard, and Mr. E. S. Hunt.

**The Transportation Club.**—The Minister of Transport, the Rt. Hon. J. V. Boyd-Carpenter, and the Chairman of British Transport Commission, General Sir Brian Robertson, will be the principal guests at a dinner to be given by the Transportation Club at 44, Wilton Crescent, S.W.1, on December 15.

### Gatwick Airport to be Enlarged.

—The Government has decided that Gatwick Airport shall be developed as the main alternative airfield for aircraft diverted from London Airport and also take over some services which operate from London. A White Paper (Cmd. 9296) has been issued which gives the chief reasons for the decision.

### Lines Disrupted in Southern Scotland.

—Floods in Southern Scotland last week affected both main lines from Carlisle to Glasgow. On October 29, a bridge near Beattock Summit signalbox was carried away and a landslide blocked the line at Carronbridge, in Nithsdale, a bridge was also swept away between Creetown and Gatehouse-of-Fleet, on the Dumfries-Stranraer line.

### Institution of Mechanical Engineers: 1955 Summer Meeting.

—The Council of the Institution of Mechanical Engineers has accepted an invitation from the chairman and committee of the Southern Branch to hold next year's Summer Meeting in Southampton and district, and it is proposed that the meeting should take place during the week beginning Monday, July 4. A wide variety of engineering interests, including research and development work, are centred in and around the district, as well as many places of historical interest.

### European Management Conference.

—The first European Management Conference to be held took place at Torquay from October 20-23. It was organised by the British Institute of Management, the central national body for management in this country, and was attended by over 1,000 persons from all parts of Europe, representing manufacturing industry, dis-

tribution industry, local government, trade unionism, and agriculture. Addresses and discussions covered such subjects as successful experiments in production research and the role of staff colleges, universities and technical colleges in training for management.

### European Air Fares Increase.

—Agreement is reported to have been reached at a meeting in Venice of the International Air Transport Association to increase air fares in Europe next year by 6s. to 1s. in the £. subject to the approval by the Governments concerned.

### Victorian Railways Exhibition in Melbourne.

—One of the many visitors to the recent Victorian Railways Centenary Exhibition in Melbourne was Lt. General Sir Dallas Brooks, Governor of Victoria. As reported in our September 17 issue, the Town Hall section of the exhibition contained a model railway 1,400 sq. ft. in extent, over which ran trains representing all periods of Victorian Railways development from 1854 to the present day. One model was of the first steam train in Victoria, and Australia, which first ran in September, 1854, between Melbourne and Port Melbourne.

### Fulmer Research Institute Open Day.

—The new engineering laboratory of the Fulmer Research Institute, Stoke Poges, was opened on November 2, which was also the 1954 open day, by the Duke of Edinburgh. Mr. P. Horsfall, Chairman of Almin Limited, the group which founded the Institute, welcoming His Royal Highness and the guests at luncheon, emphasised the importance of the work of the Institute in metallurgy, and the progress made since its foundation in 1946 by the late Colonel W. C. Devereux. The Duke of Edinburgh, in reply, thanked Mr. Horsfall and stressed the importance of research, pointing out that the Fulmer Institute paid its own way through the research work it performed.

### Institution of Electrical Engineers: Extra Meeting.

—An extra meeting of the Institution of Electrical Engineers will be held in the Institution building, Savoy Place, London, W.C.2, on Thursday, November 11, at 5.30 p.m., tea at 5 p.m., when a paper will be read and discussed on "The overhaul and maintenance of D.C. traction motors," by Mr. J. C. Bruce. The Council of the Institution of Electrical Engineers have extended an invitation to the members of the Institution of Locomotive Engineers who are interested in the subject to attend this meeting and, if they wish, to take part in the discussion. Advance copies of the paper may be obtained from the Secretary of the Institution of Locomotive Engineers.

### Increasing Railway Efficiency.

—In *The Railway Review* of October 22, Mr. J. Campbell, General Secretary of the National Union of Railwaymen, refers to the progress of joint consultation on the railways and deplores the gradual diminution of enthusiasm in the railway service since nationalisation. Joint consultation on the railways, he thinks, has made less progress than it has in other industries. He urges his readers to recreate the spirit of January, 1948. The document agreed between the British Transport Commission and the three railway trades unions on October 8, with its provisions for meetings of local staff representatives with appropriate railway officers within four weeks,



At the new Railway Benevolent Institution offices on October 20: Mr. J. W. Watkins making the presentation to Mr. H. C. Walton

he regards as a matter which should be specially noted and acted on by N.U.R. members. These meetings, by improving efficiency, he says, can be the beginning of a fight to retain traffic and win lost traffics back to the railways.

**Ferranti and Powers-Samas Collaboration.**—Ferranti Limited and Powers-Samas Accounting Machines Limited announce that they have agreed to collaborate in the development, production, and marketing of electronic data processing equipment.

**British Insulated Callender's Cables Limited, Luton Depot.**—British Insulated Callender's Cables Limited announce that on November 1 the company's Bedford Depot was closed down and a new depot opened at 81, Dumfries Street, Luton. The telephone number of the new depot is to be Luton 6866. Mr. W. H. Spillman is in charge.

**High Driving Standards of British Railways Motor Drivers.**—Mr. C. T. G. Carter, Chief Constable of York, presenting awards for safe driving to 33 British Railways motor drivers at York, North Eastern Region, on October 27, commented that railway motor drivers set a high standard of careful, considerate driving, which was reflected in the awards, and he congratulated the recipients.

**N.U.R. President on Union Differences.**—Describing as a tragedy the differences which had arisen between the three railway trades unions during the recent wages structure negotiations, Mr. J. W. Stafford, President of the National Union of Railwaymen, said at Taunton recently that, although a settlement had been reached, the cost of living was still increasing. Whatever differences existed between the three trades unions, they would have to get together very shortly to meet a common problem. If the industry was not making sufficient money to pay men a wage which would secure them a living standard, something would have to be done about it. If the problems of the railway industry were to be solved, he declared, there would have to be, in the first place, direct consultation locally between management and staffs.

**Toronto Underground Aluminium Cars.**—The aluminium alloy cars for the Toronto Underground, recently completed by the Gloucester Railway Carriage & Wagon Co. Ltd., will shortly be despatched. It was decided to build the cars to obtain an assessment of the economics of aluminium construction, and except for the construction of the body, the cars are identical with the steel cars fully described and illustrated in our issue of January 8, 1954. Adoption of aluminium has resulted in a weight saving of 5½ tons on each car, thus reducing the weight of the superstructure from 22½ to 16½ tons. Direct comparison of performance and operating costs will be possible. In maintenance also the aluminium cars are expected to show a saving, since no external paint will be used on the bodywork. Two further aluminium cars are to be constructed.

**Fell Under Train in Crowd: Damages Claim Fails.**—A man who said he was swept under a train by a football crowd at Manchester Central Station and had an arm severed, has lost his claim for damages against the British Transport Commission, at Liverpool Assizes. He was described by his counsel as weighing only seven stone and being exceptionally small.

Counsel stated that on March 25, 1950, after an F.A. Cup semi-final, when the train came in there was "a wild surge" towards it, and the plaintiff went over the edge of the platform "like a feather in the stream," and under the moving train. He submitted that the railway authorities should have had sufficient police and porters to control the crowd. The defence was that the plaintiff tried to open a carriage door when the train was moving. Mr. Justice Gorman, giving judgment for the Commission, said he found no negligence on its part.

**Costa Rica Railway Co. Ltd. Payment.**—The Costa Rica Railway Co. Ltd. is to make a payment on November 12 of 3½ per cent on account of arrears of interest on the 6½ per cent second debentures. The payment is made up of ¼ per cent balance for the year to June 30, 1940, and 2½ per cent on account of the year to June 30, 1941.

**Rail-Road Bridge Over Danube.**—According to a German source, a double-deck rail and road bridge has been constructed across the Danube to link Giurgiu (Roumania) and Ruse (Bulgaria), replacing the previous train and road vehicle ferries. The bridge carries a road on the upper deck and a railway beneath. It has considerable political significance as it brings Bulgaria into direct contact with the other "Iron Curtain" countries; formerly the only through rail connection was via Yugoslavia, and the Sofia branch of the "Baltic-Orient Express," which ran via Bucharest, had to use the train ferry.

**B.I.S.R.A. Battersea Laboratories.**—The work of the London Group Laboratories of the British Iron & Steel Research Association will be open for inspection at 140, Battersea Park Road, London, S.W. 11, on November 18, between 10 a.m. and 5 p.m. Visitors will be able to see the facilities for research into many aspects of the problems of the iron and steel industry, and also learn something of the specific services which B.I.S.R.A. can render firms in the industry. There will be an extensive display of current and recent research projects under various divisions and departments of the organisation, illustrated in many instances by test rigs and working or static models.

**Road Haulage Disposals.**—The Road Haulage Disposal Board and the British Transport Commission have now given details of the disposal of transport units offered for sale in Lists Nos. 7 and S1, advertised on July 28 and 14 respectively. As at October 20, the highest tender had been accepted for 631 general units (1,401 vehicles), offered in List 7. All tenders were rejected for 201 units (666 vehicles) and no decision had been reached on one unit (four vehicles). Of contract hire units in the same list, nine (21) vehicles were sold for the highest tender and all tenders were rejected in three cases (18 vehicles). All of these units were without premises. In the same list were a number of units with premises. Of these, three (44 vehicles) were sold for the highest tender, all tenders for 12 units (202 vehicles) were rejected, two units (31 vehicles) remained undecided, and no bids were received for 11 units (150 vehicles). List S1 contained units with premises, of which 11 (246 vehicles) were sold for the highest tender. All tenders for 24 units (469 vehicles) were rejected and four units (99 vehicles) were undecided. No bids were received for six units (342 vehicles).

## Forthcoming Meetings

- Until end of year.—"Popular Carriage" Exhibition (Two centuries of carriage design for road and rail) in the Shareholders' Meeting Room, Euston Station, London, N.W.1. Weekdays 10 a.m. to 7 p.m.; Sundays 2 to 7 p.m.
- November 8 (Mon.).—Institute of Transport, Merseyside Section, at the Adelphi Hotel, Liverpool, at 7 for 7.30 p.m. Annual dinner and visit of Sir John Elliot.
- November 8 (Mon.).—Historical Model Railway Society, at the headquarters of the Stephenson Locomotive Society, 32, Russell Road, London, W.14, at 7 p.m. Talk entitled "The world of model railways," by Mr. R. J. Raymond.
- November 9 (Tue.).—South Wales & Monmouthshire Railways & Docks Lecture & Debating Society, in the Angel Hotel, Westgate Street, Cardiff, at 6.30 p.m. Paper on "Reminiscences at Southampton Docks," by Mr. P. R. Biddle, Docks & Marine Manager, Southampton.
- November 9 (Tue.).—Railway Service Christian Union Birthday Celebrations, in the London Midland Region Clerical Dining Club Hall, Cardington Street, Euston, N.W.1, at 6.15 p.m. Illustrated talk by Mr. Cecil J. Allen, entitled "Across the roof of Europe by the Glacier Express."
- November 10 (Wed.).—Institute of Transport, Beds, Cambs & Hunts Section, at the Round Church Hall, Cambridge, at 6.45 p.m. "Indian transport reminiscences," by Sir Kenneth Mitchell.
- November 10 (Wed.).—Institute of Transport Anniversary Luncheon at the Connaught Rooms, Great Queen Street, London, W.C.2, at 12.30 for 1 p.m.
- November 10 (Wed.).—British Railways, Southern Region, Lecture & Debating Society, at the Chapter House, St. Thomas' Street, London, S.E.1, at 5.45 for 6 p.m. Illustrated paper on "Charting the seas," by Commander J. H. Macmillan, Southampton Harbour Board.
- November 10 (Wed.).—Institute of Traffic Administration, London Centre, at 16, Queen Anne's Gate, London, S.W.1, at 7 p.m. Supper meeting. Mr. Gerald Nabarro, M.P., and Mr. A. J. Champion, M.P., debate "Monopoly in transport, private or public."
- November 10 (Wed.).—Corporation of Industrial Managers. Meeting to be addressed by Mr. Winston Rodgers, in the Charing Cross Hotel, Strand, W.C.2, at 7.30 p.m., on "The manager and industrial engineering."
- November 11 (Thu.).—Institution of Electrical Engineers, at Savoy Place, London, W.C.2, at 5.30 p.m. Paper on "The overhaul and maintenance of D.C. traction motors," by Mr. J. G. Bruce.
- November 11 (Thu.).—Public Transport Association at Grosvenor House, Park Lane, London, W.1. Annual dinner.
- November 11 (Thu.).—British Railways, Western Region, London Lecture & Debating Society, at 5.45 p.m. Debate with Oxford University Railway Society at Oxford.
- November 11 (Thu.).—British Railways, North Eastern Region, York Locomotive Society, at the Railway Institute, Queen Street, York, at 6.45 p.m. Paper on "The career of the steam locomotive," by Mr. W. A. Tuplin.

- November 11 (Thu.).—Locomotive Society of Scotland, at 302, Buchanan Street, Glasgow, C.2, at 7.15 for 7.30 p.m. Paper on "The development and operation of locomotive injectors," by Mr. R. Metcalfe.
- November 11 (Thu.).—Hull District Stationmasters' Discussion Group. Open meeting in the Anlaby Road Institute. Paper on "Electrification, Wath-Sheffield-Manchester," by Mr. H. C. Johnson, Divisional Operating Superintendent (Western), Eastern Region, Liverpool Street.
- November 12 (Fri.).—Institute of Transport, North Staffordshire Group, at the Grand Hotel, Hanley, at 6.30 p.m. Paper on "Public Relations," by Mr. George Dow.
- November 13 (Sat.).—Stephenson Locomotive Society, North-Western Area, at the Manchester Geographical Society's Rooms, Deansgate, at 6.15 p.m. Talk on "An enthusiast recollects," by Mr. Stewart Dewsbury.
- November 15 (Mon.).—Institute of Transport, in the Jarvis Hall (R.I.B.A.), 66, Portland Place, London, W.1, at 5.45 p.m. Paper on "Coastwise-cross-Channel," by M. Arnet Robinson.
- November 15 (Mon.).—British Railways, Southern Region, Lecture & Debating Society. Silver Jubilee Celebration Dinner at the Strand Corner House, London, W.C.2, at 6.30 p.m.
- November 16 (Tues.).—Institute of Transport, Metropolitan Graduate & Student Society, at 80, Portland Place, London, W.1, at 6.15 p.m. Annual general meeting followed by paper on "The Transport Tribunal" by Mr. H. W. Brooksbank.
- November 16 (Tues.).—Institute of Traffic Administration, Manchester Centre, in the Board Room, Registrar's Office, All Saints, at 7 p.m. Paper on "Railway parcels" by Mr. E. H. Burn.
- November 17 (Wed.).—Permanent Way Institution, at the headquarters of the British Transport Commission, 222, Marylebone Road, London, N.W.1, at 6.30 p.m. Paper "Railway news and views" by Mr. B. W. C. Cooke.
- November 17 (Wed.).—Institution of Locomotive Engineers, at the Institution of Mechanical Engineers, 1, Birdcage Walk, London, S.W.1, at 5.30 p.m. Paper on "A modern hydraulic drive for locomotives," by Mr. R. H. Fett.
- November 17 (Wed.).—Institution of Railway Signal Engineers, at the Institution of Electrical Engineers, Victoria Embankment, London, W.C.2, at 6 p.m. Informal discussion.
- November 17 (Wed.).—Railway Students' Association at the London School of Economics & Political Science, Houghton Street, Aldwych, W.C.2, at 6.15 p.m. Paper on "Relations within the passenger transport industry," by Mr. J. E. M. Roberts. Mr. A. B. B. Valentine will be in the chair.
- November 18 (Thu.).—British Railways, Western Region, Lecture & Debating Society, in the Headquarters Staff Dining Club, Bishop's Bridge Road, Paddington, W.2, at 5.45 p.m. Paper on "The Stock Exchange and the Railways," by Mr. E. R. Althans.
- November 20 (Sat.).—Stephenson Locomotive Society, Liverpool Centre, at 7.30 p.m., in the Conference Room, Central Station. Paper "The Churchward period on the G.W.R.," by Mr. G. H. W. Clifford.
- November 20 (Sat.).—Permanent Way Institution, East Anglia Section, at Ipswich. Annual lunch and annual general meeting.

## Railway Stock Market

There has been a more buoyant trend in stock markets this week because of the end of the dock strike, and in most sections an upward tendency was resumed. British Funds attracted renewed demand and there were many good features among industrial shares in response to news of further dividend increases and scrip issues, but best levels were not fully held. Even allowing for the higher dividends which it is generally assumed are in prospect, yields on many industrial shares at current prices are less than 4 per cent. It is partly on yield considerations that  $3\frac{1}{2}$  per cent. War Loan and long-dated gilt-edged stocks have attracted more attention. It is being argued that either leading industrial shares are too high in price, or British Funds too low. Nevertheless, there are many indications that industry has great confidence in the future, because otherwise, well-known companies such as Unilever would not estimate their future dividends on the larger capital arising from big scrip issues.

There has been rather more business among overseas and foreign rails. White Pass were outstandingly good, having advanced further on the week from  $\$34\frac{1}{2}$  to  $\$37$ , which is almost the highest level touched this year. In sympathy, the convertible debentures were also good, having changed hands up to  $\$120$ . The loan stock was again quoted at  $\$33$ .

Canadian Pacifics, however, turned easier, and were  $\$48$ , compared with  $\$49\frac{1}{2}$  a week ago, though the 4 per cent preference stock strengthened to  $\$70\frac{1}{2}$ , and the 4 per cent debentures were also fractionally higher at  $\$91\frac{1}{2}$ .

Midland of Western Australia was again 24 with the first and second debentures at 92 and  $42\frac{1}{2}$  respectively. Ernu Bay 5 per cent debentures remained at 44 $\frac{1}{2}$ . Nyasaland Railways  $3\frac{1}{2}$  per cent debentures were 79 $\frac{1}{2}$  and the shares eased to 4s. 9d. Indian stocks were not tested by dealings, and Barsi remained at 92 $\frac{1}{2}$ .

Elsewhere, Antofagasta ordinary stock held steady at 8 $\frac{1}{2}$  on the full report and accounts, but the preference stock moved up to 49, a gain of three points. San Paulo 4s. units were quoted at 3s. 4 $\frac{1}{2}$ d. and Brazil Railway bonds were 7 $\frac{1}{2}$ . Nitrate Rails shares have changed hands around 19s. 3d., and Taitai shares were 13s. 6d.

Under the influence of the interest payment, Costa Rica second debentures gained another 2 $\frac{1}{2}$  points at 57 $\frac{1}{2}$ , and the ordinary stock strengthened to 11. In other directions, United of Havana second income stock rallied to 35 $\frac{1}{2}$  after their recent reaction, but the consolidated stock receded further to 5. Guayaquil & Quito 5 per cent bonds remained at 59, but Paraguay Central 6 per cent debentures firmed up to 20 $\frac{1}{2}$ . Mexican Central "A" debentures remained active, and at 76 $\frac{1}{2}$  more than held their recent rise. Dorada ordinary stock has been inactive, but at 80 was inclined to strengthen.

There were more gains than falls in engineering and kindred shares. Vickers, after an earlier reaction, rallied to 39s. 7 $\frac{1}{2}$ d. and, although best levels were not held, Babcock & Wilcox were 75s. 6d., compared with 74s. 9d. a week ago. John Brown were active up to the higher level of 49s. 6d. but later reflected a little profit-taking following news of the proposed free scrip issue. Ruston & Hornsby were strong with an advance from 56s. 3d. to 58s. 6d. Under the influence of the full results and chairman's annual statement, T. W. Ward moved up from 57s. 9d. to

58s. 6d. Guest Keen have been good again with a further rise from 67s. 3d. to 69s. Tube Investments moved up to 74s. 6d.

A feature has been increased demand for steel shares, Stewarts and Lloyds rising to 41s. 9d., while the premium on John Summers was up to 2s. 9d. The yields of around 7 per cent on steel shares are now attracting increased attention, because this return is regarded as generous now yields on many leading industrial shares have declined to below 4 per cent. There is the political factor of possible re-nationalisation of steel, but there is a growing view that this is unlikely. News of the next steel issue is expected this month.

Shares of locomotive builders and engineers have been active with Beyer Peacock at 43s. 3d. or virtually the same as a week ago, Hurst Nelson again 38s. 6d., while Birmingham Carriage moved up from 29s. 1 $\frac{1}{2}$ d. to 30s. North British Locomotive were 16s. 7 $\frac{1}{2}$ d. Vulcan Foundry lost 6d. at 28s. 6d., Gloucester Wagon 10s. shares strengthened to 17s. 6d., and Wagon Repairs 5s. shares to 13s. 10 $\frac{1}{2}$ d.

## OFFICIAL NOTICES

*The engagement of persons answering Situations Vacant advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employer, is excepted from the provisions of the Notification of Vacancies Order, 1952.*

**ENGINEER** required for railway location in northern part of South America to take charge of topographical survey parties and to undertake final site location for railway. Should be experienced and preferably between the ages of 35 and 45. Salary according to qualifications. Also required two **ASSISTANT ENGINEERS** with good topographical surveying experience for independent parties under foregoing Engineer. Reply, giving full particulars of experience and qualifications, to Box OC/208, c/o 95, Bishopsgate, E.C.2.

**LONDON TRANSPORT** require temporary technical assistant, office of the Assistant Civil Engineer (Permanent Way); knowledge of permanent way design, drawing office experience, grounding in civil engineering, knowledge of mathematics, ability to use theodolite and level and make land surveys. Students of Institution of Civil Engineers preferred but young graduates without experience considered. Salary £343 10s. at 21 rising to £613 10s., subject to satisfactory service, with additional payments for certain recognised qualifications: medical examination. Applications to Staff Officer (F/EV.281), London Transport, 55, Broadway, S.W.1. For acknowledgement enclose addressed envelope.

**BRUSH BAGNALL TRACTION LTD.**, Loughborough Leics., have vacancies for an experienced Design Engineer and a Draughtsman in the Rotating Machine Department for work in connection with diesel electric locomotives. Applicants for the post of Designer should preferably possess an Honours Degree or be Graduate Members of the Institution of Electrical Engineers. Candidates for the post of Draughtsman should preferably hold a Higher National Certificate in Electrical or Mechanical Engineering. These positions call for men able to work with limited supervision and carry attractive salaries plus non-contributory superannuation, sick pay and other benefits. Please apply with full details to the Chief Personnel Officer.

**THE HIGH COMMISSIONER FOR INDIA** invites tenders for the supply of:—2,759 Axles C & W. 16 ton (B.G.) 10 in. x 5 in. Journal (STEEL). Forms of tender may be obtained from the Director General, India Store Department, 32/44, Edgware Road, London, W.2, on or after 5th November, 1954, at a fee of 10s. which is not returnable. If payment is made by cheque it should please be made payable to "High Commissioner for India." Tenders are to be delivered by 2 p.m. on Friday, 3rd December, 1954. Please quote reference No. 255/54/DH/RLY.3.

**RAILWAY MATERIAL.** Plain Sleepers, Chaired Sleepers, Rails of all Sections, Crossing Timbers. We undertake the supply and laying of all classes of siding installations.—The Railroad Plant Supplies Co. Ltd., 13 Waterloo Road, Wolverhampton. Telephone No. Wolverhampton 23617.

**BOUND VOLUMES.**—We can arrange for readers' copies to be bound in full cloth at a charge of 25s. per volume, post free. Send your readers to the SUBSCRIPTION DEPARTMENT, Tottill Press, Limited, 33, Tottill Street, London, S.W.1.